The American Journal of
CLINICAL MEDICINE
Dependable Therapeutic Fact for Daily Use

FEBRUARY MCMXVII

Is There a Positive Treatment for Pneumonia?

PROFESSOR SOLIS COHEN says "Yes," and describes in detail his method of treating acute lobar pneumonia. This should be a timely article for every general practitioner to study.

Many other articles on many subjects, and carrying important messages, will be found in this issue of ***Clinical Medicine.*** We think it is a good one.

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Is there an Active Treatment for Pneumonia

ANY physician who has read CLINICAL MEDICINE for the last ten, fifteen or twenty years will know at once how we shall answer the question given as the caption of this article. Of course, there is a medicinal treatment for pneumonia. The men who have treated the most cases, studied their drugs most carefully, and have given the highest degree of care to the fitting of remedy to indications will agree with us. The therapeutic pessimists are not the practical men. They are the theorists, the laboratory-workers, the men who treat their patients *in their heads*—and outside the sick-room.

Corroborative evidence of the truth of this assertion may be fouud in the article by Dr. Solomon Solis Cohen, published in another department of this journal. Doctor Cohen believes in the efficacy of drugs. No man can read his article and feel otherwise. Also, Doctor Cohen is a man of probably wider experience in the treatment of pneumonia than any other practitioner in America. The fact that he has confidence in the value of medicinal therapy will, therefore, have much weight with those physicians who know how painstaking, how well informed, how successful Doctor Cohen is.

Of course, we do not agree with everything that Cohen says. We do not even admit that either the remedies or the methods employed by him are, necessarily, the best, although it is probable that they are best suited in that class of cases with which he has to deal. The average physician, we believe, will be well pleased with the methods advocated by Doctor Wolverton, a country doctor of large practice and wide experience, whose paper appeared in the January number of this journal. The point to be kept in mind is, that both of these men are enthusiastic users of drugs; both have a clear idea in mind as to the purpose for which their remedies should be employed; both are successful in combating pneumonia.

Therefore, we suggest that these two presentations be studied carefully, and side by side. There is no reason why any thoughtful physician should not combine some of the ideas of the two men. For instance, the use of the quinine "antitoxic" treatment advised by Doctor Cohen is, by no means, incompatible with the careful regulation of the circulatory apparatus so strongly insisted upon by Doctor Wolverton. If Doctor Cohen sees the necessity of supporting the heart with pituitary solution or cocaine, Doctor Wolverton equally emphasizes the value of cardiac support, although he depends mainly upon digitalin. Both men use bac-

terins, although Doctor Wolverton emphasizes their value, while Doctor Cohen finds greater merit in his "antitoxin," to wit, the injection of quinine and urea hydrochloride.

We shall be very glad to have a discussion of pneumonia in the next number of CLINICAL MEDICINE. The pages of this journal are freely open to every reader for an expression of opinion as to the value of the methods proposed in these two papers, and for any other suggestions likely to prove of help to the practitioner.

I believe in the smile. But I claim that there must be something back of the smile. The smile that is enkindled by the right sort of brain stuff, and soul stuff, and I might add body stuff, and which beams from the eye and lights up the face of the true man, is indeed an asset of much value in the factory, on the road, behind the counter and in all walks of life. But without this fuel, I never knew a smile to be warm or cheering.

—Henry Ford.

HEADACHE: A FEW SUGGESTIONS

There be physicians erudite and scientific who can discourse learnedly anent the morphology of the mesoblast, while they are unable to cure a headache. Ninety-nine cases of headache come to the young doctor for every one case of pneumonia; ninety-nine cases of pneumonia come to him for one case of locomotor ataxia.

There may be an occasional case of headache that does not need a cathartic. The consequent liquefaction of the intestinal contents often increases the headache for a time. This is avoided by substituting a cold salt-enema.

When headache really depends upon a disordered stomach, give the alkaline half of a seidlitz powder separately, then give the acid powder, each dissolved in a modicum of water. Be careful, go slowly, give a little at a time, remembering the danger of gaseous distention to a diseased stomach-wall or a weak heart.

If gastric fermentation is present, give zinc sulphocarbolate, grains 2 1-2 every half hour until relief has been obtained.

If the acidity is marked, give the sulphocarbolate of sodium.

The headache and nausea of acute gastric catarrh are relieved by strychnine nitrate, 1-128 grain every hour. This also relieves the headache of constipation.

For the headaches of sedentary brain-workers, associated with a full meat diet, give atropine valerate, 1-250 grain every thirty minutes, until the face reddens. But, if the pulse is full, the eyes bright, the face flushed, then substitute gelseminine, 1-50 grain every two hours. To prevent the return of such attacks, when habitual, give veratrine, 1-64 grain, in a full glass of water an hour before meals.

Blinding headaches either in the supra-orbital region, together with nausea, vomiting because of hepatic derangement, or sour eructations after eating fats, are admirably relieved by iris versicolor, giving enough to act decidedly on the bowels. It should be fresh. Or, the concentration, irisoid, may be given.

Bilious headaches, with vomiting, subside under bryonin—a small dose repeated every half hour until relief is experienced or the pulse softens. A copious colonic flush helps.

Periodic headaches may be aborted by giving picrotoxin, 1-128 grain half an hour before the paroxysm is due. If too late for this, a full sweat-dose of pilocarpine, 1-6 grain, will break up the attack.

For sick-headache, when there are dark offensive stools, give podophyllotoxin, 1-12 grain every hour for six doses, then a saline laxative.

Headaches, with gastric disorder and uneasiness, especially with delayed or irregular menstruation, are generally relieved by sanguinarine, 1-64 grain every ten minutes until relieved or nauseated.

Few remedies for neuralgic headaches equal Anstie's treatment—a hot mustard foot-bath, inhaling the steam; 10 grains of chloral hydrate; covering up warm in bed and sleeping eight hours.

Major neuralgias give way to a galvanic current of low intensity. The ache will soon return, when the application should be repeated, even for twenty-four hours, until the attack has been quelled. The next one will be easier to break, and so on with each succeeding one.

Start with the axiom that every headache is toxemic, and it may be long before you encounter an exception.

Without questioning the power of acetanilid and its congeners to relieve headaches, I firmly believe, after many years' experience, that it is better to cut this agent entirely out of our list of headache-remedies.

The headache of hyperpyrexia demands the instant treatment of that condition—cold to the head, cold salt-enemas, veratrine in full doses, antipyrin carefully.

The dull headache, with growing stupor of intense toxemia, demands the cold salt-enema, hydragogs, pilocarpine, venesection i. e., blood-washing.

Removal of foci causing toxemia means much more than mere purging or sweating. We cannot make this article a system of practice.

Headaches—recurrent, constant periodic—have meanings that call for diagnostic skill rather than for relief. Eye-strain causes headache that is eased by atropine, but much better examine the eyes and fit glasses.

If headaches pester you, consult the doctor that has the biggest bump of curiosity.

Don't forget the cachexias as headache inducers—syphilis, malaria, anemia, lead, arsenic, above all, fecal stasis and autotoxemia.

Garretson, the father of oral surgery, said that all headaches were due to trouble along the nerves going to the teeth. He saw the jaws of the elephant.

Gould said that all headaches were due to eye-strain. He saw the elephant's eyes.

Woakes asserted that all headaches were due to disease of the ethmoid sinuses. He saw the elephant's nose.

Bouchard says that all headaches are due to fecal autotoxemia. He sees the elephant's bowels.

Another physician says that all headaches are due to uteroovarian disorders. He sees the elephant's reproductive organs.

Beard thought that all headaches were due to neurasthenia and curable by various electric appliances.

Each of these, and many more specialists, sees his section of the elephant and is blind to all the rest. In the course of medical progress, there may, in time, arise the man who can see the whole animal at once.

So, also—

Massey cures headaches by means of electric currents, and he tells us of very many uses to which electricity may be put therapeutically.

Abrams tells us of very many therapeutic applications of spondylotherapy.

Baruch teaches us the very many useful applications of hydrotherapy.

Pratt cured (?) everything, including bad eyesight, by operating for hemorrhoids.

Edebohls devised many excuses for decapsulating the kidneys.

Joe Price found very many reasons for oophorectomy.

All the surgeons whacked the appendix as one would a rattlesnake.

Every newly devised operation is pounced upon as one would jump for a go'd nugget. But they will *not* all cure headache.

Eddy vanquished death itself by mere strength of will. Perhaps.

Will the day ever come when we shall know how to select from our therapeutic armory the best weapons for each of the pathologic conditions presenting to us?

Well, many good people still believe in the coming of the millennium; but a good many of us have our doubts, when we survey the glacial progress of human development.

Lincoln usually applied his rules of living to his own life. The following advice, given to a young man acquaintance, is worthy of some thought and application: "Do not worry; eat three square meals a day; say your prayers; be courteous to your creditors; keep your digestion good; steer clear of biliousness; exercise; go slow and go easy. Maybe there are other things that your special case requires to make you happy, but, my friend, these, I reckon, will give you a good lift."

"SYMPTOMATIC THERAPY" AS SEEN BY DOCTOR SCHROER

Until little more than one century ago, the "science" of medicine was almost purely speculative, and stood, more or less absolutely, under the influence of the teachings expounded by Galen seventeen hundred years ago. The medical literature of the middle ages is full of philosophical disquisitions and discussions dealing mainly with conditions and processes as the authors believed they ought to be and only rarely descending to the solid foundation of facts.

Here and there, however, the attempt was made to base the views concerning the causes, nature, and treatment of diseases upon actual facts as they are observed in the living body in the sickroom and in the dead body at necropsy, and the deliberate endeavor to study disease in this pragmatic manner took its inception more particularly with Morgagni. With the physiological studies instituted by Albrecht von Haller and his successors, and further with the perfection and employment of the microscope and, more particularly, with the advances of research in all branches of medicine, more exact data had become available and medicine was placed on a reasonable basis in so far as it concerned the treatment of disease.

Nevertheless, to this day many physicians still are indulging in a pessimism concerning our ability to influence disease-processes that is greatly to be deplored, and the more so as it is not in accordance with clinical and experimental experience.

In a leading article appearing in this number of CLINICAL MEDICINE the learned author (Dr. H. Schroer) manifests this uncalled-for pessimism, questioning, as he does, among other things, the justice and reasonableness

of the drug treatment of pneumonia, contending that it is not good practice to stimulate the heart when this organ already is forced to accomplish its best under the whiplash stimulation of the toxins circulating in the blood.

There would be food for speculation in discussing the difference between "stimulating" the heart and "supporting" it by means of remedies that act, not so much by whipping up the tone of this organ, as by strengthening it. One must not forget that heart weakness ordinarily supervenes in certain stages of pneumonia, and that it is essential at this time to force the organ to bring all its resources into the battle with the disease. Consequently, cardiac remedies are a positive requirement. After a horse has been forced, with the whip, to a special effort, it is permitted to rest and, if possible, given food, in order that it may recover the energy lost. In like manner, it may be necessary in an emergency to whip up or stimulate the heart to an unwonted degree of effort, sufficient to tide the organism over a period of abnormal functioning; but, also, when the crisis is past, it will be the duty of the physician to take measures by which the overworked heart may be rested and supported after its excessive labor.

It may be said in general that drugs always should be given with a clear understanding of the indications to be met by them and with a full appreciation of what they are expected to accomplish; they should never be prescribed or administered in the absence of positive definite indications. Properly given, drugs are the physician's most powerful weapons in his struggle against disease, and the whole tendency of modern therapy points in that direction. We are giving our remedies in a less empirical manner in these days; hence, as we understand how they act and why they act, we are attaining with them a larger degree of success.

We are not eager to break a lance with Doctor Schroer in the support of the epileptococcus, even though his objection, "that this coccus must be present in the colon of healthy individuals and be absorbed without effect, would suggest that epilepsy is a disease of the brain and not of the colon," is, in our opinion, not well taken. We leave this to his fellow-townsman, Dr. C. A. L. Reed. But—it is quite possible for a certain bacterium to be present in the human tissues without causing disease, and, indeed, this is a constantly prevailing condition, except in those persons in whom the general or the specific resistance to this particular micro organism is diminished to such a degree that the disease can develop.

If Doctor Schroer believes that "the body can never rise above the standard of equilibrium peculiar to itself," and that it cannot produce groups necessary to antagonize all forms of chemical compounds acting upon the cell," with the understanding that this relates both to drugs and to bacterial remedies, we again must differ with him.

The studies of Ehrlich indicate that the receptor-apparatus postulated by him, functionates by producing receptors that are adjusted to, or possess an affinity for, internal and external influences, more particularly the cells. It must be remembered that Ehrlich's side-chain theory originally was established not in an attempt to explain the organic resistance to infection, but in order to elucidate the manner in which the organism makes use of the materials supplied as nutrient pabulum.

The side-chain theory of immunity is an extension and development of the side-chain theory of nutrition. As any substance is taken up into the circulation, it meets with receptors that act upon it in such a manner that it is disintegrated into its component parts and can then be made use of for the needs of the body—thus serving as "food." The receptors being adjusted to, or having an affinity for, foreign substances of widely differing nature, the organism is able to take care of so many and various substances as they are being introduced.

It is the assumption of the presence of these "receptors" that helps us to understand the organic response to bacillary invasion and also the influence of foodstuffs and of drugs upon the body. The cells of the organism certainly can be trained to produce "groups necessary to antagonize all forms of chemical compounds acting upon the cells." This is true at least in so far as there is the response of the organism to the action of bacteria, and in each case of this sort the organism can develop corresponding antibacterial substances by which the integrity and viability of the invading microorganisms are diminished and destroyed. This fact, which has been established experimentally, forms the basis of the antibacterial or specific treatment of infectious diseases. The question is only as to what form of bacterins or vaccines is to be chosen.

The function of the receptor-apparatus goes further and probably affects the absorption of drugs into the organism, although

this side of the problem has not as yet been studied from the standpoint of the biologist.

Therapeutics may have come into existence in a purely empirical way, but it is being supported, justified, clarified, and firmly established by modern science and its workshop—the laboratory. Theories come and hypotheses go—but the labors of the physician keep on bearing fruit in the relief of suffering and the prolongation of life.

Germs go only where they are carried by animate carriers—persons, animals, or insects. Surreptitious visitors, old women of the neighborhood, are responsible for many an unnecessary illness, among children particularly. Cats, dogs, mosquitoes, flies, lice, ticks, squirrels, rats, mice, and certain wild animals are known to be carriers of disease. However, the human carrier is the chief offender, and the human carrier does his work largely, we think, with saliva-contaminated hands.

—William Brady, in "Personal Health."

HEALTH INSURANCE: A LEGISLATIVE LIVING ISSUE

Without beginning a discussion of the wisdom or the folly of health insurance, we take this opportunity of advising the readers of CLINICAL MEDICINE that the problem is one which should be discussed *now*, since it must be dealt with soon. A "model" health-insurance law has been prepared by an organization created for the discussion and evolvement of labor-legislation; and, thus will soon be submitted to the legislatures of many of our states, in fact, has already been submitted to quite a number. This legislation has been endorsed by Governor McCall, of Massachusetts; and it has been discussed in this city by the Chicago Medical Society, and tacitly, if not actively, approved by the legislative committee of the Illinois State Medical Society.

The bill submitted in this state provides that every wage-earner receiving less than $100.00 per month will be given compulsory insurance against sickness, the cost of this insurance being divided between the laborer, his employer, and the state, in the proportion of 40, 40 and 20 percent respectively. The beneficiaries will receive free medical and dental service, free nursing, free drugs and appliances, free hospital care, sick benefits, and (if they die) free funerals.

Such a scheme of insurance has certain advantages and certain disadvantages, which we shall not attempt to discuss at this time. Our purpose is, to urge every medical society in this country to make a thorough study of this proposed legislation and either to endorse or condemn it.

We are rapidly becoming socialized in America. As to whether this is good or whether it is evil, depends upon one's point of view. However that may be, no change of this kind should be brought about too hastily and without careful consideration and intelligent discussion. Economically, our country is at the parting of the ways, and this proposed legislation is but a harbinger of the great struggle not far ahead. Which path shall we take?

If any reader of CLINICAL MEDICINE wishes to expresss himself through these pages, the opportunity is his.

"PAYUP WEEK"

The Illinois Bankers' Association has designated the week of February 19 to 24 as Payup Week. During this week, they are urging every individual to pay up the bills, which he, the same as everybody else, owes, many of them small in themselves, but enormous in their aggregate.

The idea seems to us a good one and worthy of nationwide endorsement. For this reason, we pass it along to the readers of CLINICAL MEDICINE, with the suggestion that they bring this "payup week" to the attention of their clients; also, that they take advantage of the suggestion to pay up their own small bills—whether for groceries, drugs, journals, books or anything else.

Sotto voce—and, as a gentle reminder—we can use to good advantage the several thousands of dollars accumulated on overdue subscriptions.

"It ain't the guns nor armament, nor the band that they can play
But the close co-operation that makes them win the day.
It ain't the individual, nor the army as a whole,
But the everlasting team-work of every bloomin' soul."

—Rudyard Kipling.

SIR LAUDER BRUNTON

In the death of Sir Lauder Brunton the medical profession of today has lost a great therapeutist. Niemeyer, Waring, Ringer, Gubler, Trousseau, Wood, the men who established practical therapeutics upon a scientific basis, have passed away—and left no successors. Opposed to this distinguished group, we now have only the dense pessimism that dismisses therapeutics from the curriculum of medical schools, leaving it to be practiced by pharmacists from the standpoint of the pharmacists' ignorance.

Sir Lauder Brunton was born in 1844, received his medical training in Edinburgh, studied in

Berlin, Vienna, Leipsic, and Amsterdam, taught at St. Bartholomew's (London), and in 1885 published his work titled "Pharmacology, Therapeutics and Materia Medica." Of the latter, *The Lancet* says: "Lauder Brunton's comprehensive book was the first to consider pharmacology as a scientific study of the physiological action of drugs." His "Action of Medicines" was published in 1897. He retired from St. Bartholomew's in 1904, after twenty-nine years of service. He was knighted in 1900 and in 1909 was made a baronet. His later years were filled to the last possibility with the duties of a consulting physician; so much so that he had not time to give his works the revision that he desired to make.

Take Brunton's work printed in 1885 and observe the thorough, profound, original nature of its contents; the analysis that he makes of the cardiants, which has nothing equaling it in similar works produced twenty years later; the close connection maintained between the pharmacological studies and the demands of the clinician. In many particulars the profession has been working up toward Brunton in the years since 1885, but in some instances the gap has not yet been closed. Many researches have been made since that date and facts have been added to Brunton's stock—have they discredited any of his own? Brunton was an original worker—there is scarcely a trace of the compiler in h's books.

To the student of this work, his later publications have been disappointing—the duties of his enormous practice interfered and prevented him from making of these writings much more than a rehash of the earlier work.

An indefatigable worker himself, Lauder Brunton had the faculty of inciting others to labor in the fields that proved so fruitful under his cultivation. A suggestion of his was responsible for the series of observations upon the effects of tubercle bacillus extracts upon animals, as made by Dixon, of Philadelphia—experiments which antedated the announcement by Koch by a full year. Another prescient observation by Brunton was that "ultimately not only locomotor ataxia but the chronic maladies of the spinal cord in general will be found to be dependent upon fecal toxemia as their etiologic factor."

Upon the tomb of Sir Lauder Brunton, we drop the laurel wreath, as worthily earned; yet, we do not feel for his demise the same regret that we should for one who is cut down in the outset of his career, the bud of great promise blasted; but rather the respect and reverence due to one who has done his work, and has done it well.

God has not given us vast learning to solve all the problems, or unfailing wisdom to direct all the wanderings of our brothers' lives, but He has given to every one of us the power to be spiritual, and by our spirituality to lift and enlarge and enlighten the lives we touch.

—Phillips Brooks.

THE INFLUENCE OF THE WAR ON THE FOOD-PROBLEM

A few weeks ago, I had the opportunity of speaking to a friend who had just returned from Austria, where he was engaged in sociclogic work among the Russian prisoners; having spent there the greater part of six months, and the rest in Germany. This man informed me that the food-problem had been solved to an astonishing degree.

Our conversation brought out the fact that the assertion, which so frequently is made, that we all eat much more than is required, is now being verified on a huge scale both in Germany and in Austria. There is not the slightest doubt that despite the dietetic restrictions imposed upon the entire population of those countries the state of health and of nutrition of rich and poor, of grownups and children alike, is excellent. My friend informed me that he, himself, under this enforced restricted dietary regimen, had gained fifteen pounds over the weight he generally carried while living in New York City. The assertion also has been made that diseases resulting from dietetic indiscretions and irregularities have diminished in frequency in the Central European states and that this is being attributed to the more sensible moderate feeding.

It goes without saying that under existing circumstances in the central empires everything has to be utilized to the greatest possible extent and that waste must be cut down to the utmost. An interesting instance in this respect is presented in some accounts recently presented by the Information Bureau of the American Red Cross. according to which the milling of the wheat is carried to about 93 percent. The wheat that was ground in mills still using the oldfashioned mill stones yielded 92.6 percent of flour and 3.7 percent of fodder, while the waste and dust did not amount to more than 3.7 percent. This is truly a remarkable showing and is in keeping with the newer dietetic teachings, according to which the milling of wheat and other grain-foods should be carried to a greater extent than is customary, and that far more of the

grain should be utilized for human consumption.

It is an ill wind that does not blow good to someone, and one can justly say that there is no doubt but that in spite of all its frightfulness the present war will teach mankind some valuable lessons, particularly in dietetics and economics.

It is a healthy sign to see an occasional writer on therapeutics, wearied by his endeavor to extract all healing principles from the elusive microorganism, turn back to the medical scrap-heap for valuable material discarded by the progressives for over half a century.
—Edward J. Melville.

VILE—UNSPEAKABLY VILE

An exposure of the frightful conditions prevailing in the New Jersey State Prison at Trenton is contributed by an inmate, Patrick L. Quinlan, to the January 13 number of *The New Republic*. Mr. Quinlan says, this prison "is an example of our national planlessness, our administrative *laissez faire*." The institution, as he paints it, is almost unspeakably vile, both from the sanitary and the moral point of view. Read, for instance, this picture of the physical conditions under which inmates of this prison are compelled to live:

"Despite the fact that a $35,000 bathhouse was erected several years ago, the prisoners are permitted to use it for only two months in the year. Except during July and August, bathing is not compulsory. For ten months, the prisoners receive one pail of hot water a week, which must serve to clean the body of the prisoner, his socks, handkerchiefs, and the floor of his cell. . . .

"In the cells of only four sections of the prison, are there modern lavatories. In the west, or third, wing, buckets are used to retain the offal and excreta. They are emptied every morning, by the prisoners, into an open channel that leads to the sewer. No additional facilities are provided for men who may be in their cells through illness or other causes. Nor is the rule waived when the cells are occupied all day, as on Saturday afternoon and Sunday. Life in this wing is a contest with foul odors by day and with vermin by night. Several years ago, the board of health condemned this wing as unfit to house prisoners. The oldest and most populated section, the south hall, or fourth wing, was drained by a partly covered sewer and an open channel from which gas oozed into every cell. The board of health recommended that this section be altered, but, like its condemnation of the west wing, this recommendation never was carried out by the administration."

Skipping now Mr. Quinlan's reference to the scanty educational facilities, the absence of amusement, the sabotage practiced by the keepers, and the complaints about tainted meat, "bootleg" coffee, and other repulsive foods served to the convicts, let us turn to the moral "service" of the Trenton penitentiary.

"There are," Mr. Quinlan continues, "many worse aspects than those of food and sanitation. More vitiating than anything else is the way in which prisoners are indiscriminately thrown together. Criminals, whether they are murderers, forgers, pickpockets, politicians, rapists, perverts, syphilitics, white-slavers, dope-fiends, are put with boys and mere novices in crime The only segregation permitted applies to advanced cases of tuberculosis. As a result of this stupid confusion, the majority of the prisoners are either unmoral or immoral, and the sodomist, the degenerate, the homosexual 'wolf,' or boy-lover, have many opportunities to ply their trade, sometimes at a pecuniary profit. The fact that such are punished when caught does not frighten the perverts and degenerates and those who want to use them. These men were the principal cause of all the fights and rows in the prison, and more than one murder could be traced to them. In most cases, they were 'rats,' and the best tools the keepers had."

And, as if this were not enough, Mr. Quinlan paints a picture of the system of punishment in vogue in the Trenton penitentiary that makes the Spanish inquisition and the Siberian mines look pleasant by comparison. Take his story of what was meted out to Dominick Mangani, who under provocation stabbed a keeper—this is what they did to him:

"Mangani wore a ball and chain riveted to his leg. After four years and a half the leg festered. Then someone suggested that the fetters should be taken off Mangani until his wound healed. This was done for the leg was very sore indeed. The center keeper looked at the prisoner without his leg-chain He was not used to seeing him that way after four and a half years. 'Put the fetters on the good leg,' said he. It was done, accordingly. For six years, Mangani was kept in solitary confinement, denied speech and association with his fellow convicts, and deprived of tobacco, reading-matter, and

the meanest of the usual prison privileges.

"Never for a moment during the six years of his punishment was Mangani permitted to see a friend. His wife and children were not allowed to see him. He even was prevented from going to the prison-chapel to hear mass. In short, Dominick Mangani was buried alive for six years, and, except for the rattle of the chains and an occasional scream or roar, his cell was a coffin. A few months ago. he was sent to the state asylum—and a more tragic spectacle I have never seen in all my wanderings around the world."

Can these things be in free America? And is it possible that such unspeakable vileness and brutality is meted out to human beings in other of our public institutions? We have heard the statement that similar cruelties are practiced elsewhere. If this be so, then the medical profession should know something about it; and, knowing, should do its "bit" to make our prisons at least physically clean, instead of breeders of disease; also, at least morally inoffensive, instead of breeders of crime.

Who knows? Who can tell us more?

There have been few men who have done great things in the world who have not had a large power of imagination. And imagination, if it be subject to reason, is the latter's "slave of the lamp."

MODERN DIAGNOSIS

Edward C. Hill, of Denver, contributes to *The New York Medical Journal* a paper entitled "The Sources of Error in Diagnosis," that impresses this scribe as of unusual value—even for the *N. Y. M. J.* A brief outline of some salient points may convince the reader that we are right—or wrong. We do not, as a rule, care for editorials cribbed from 'steemed contems—would much rather hear ourselves doing the talking—but this is another matter—we haven't any brainchild at present that seems worth as much as Hill's.

1. Mistaking symptoms for diseases: This was peculiar to the prepathologic period—the days of winter cough, summer diarrhea, spring fever, pinkeye, and so on. In his book titled "Pain," Hill enumerates 175 distinct causes for headache, each variety demanding its peculiar treatment. "For insomnia, we may give trional, sulphonal, veronal, luminal, and 'damnitall,' but we do not effect a cure in this way." "Cough can arise all the way from wax in the ear to an incompetent heart, as well as from any affection of the respiratory tract."

The stomach is a central signal-station for the autonomic nervous system; dyspepsia, when not owing to cancer, ulcer, obstructive adhesions or psychic state, usually is reflex from the appendix or gall-bladder. Hyperchlorhydria and acid fermentation are easily confounded. Albuminuria attends 100 conditions outside of renal disease.

Still, in many instances, treatment that cures the symptom does so only by curing the underlying malady; and we may as well be sure that we have something better before we throw away our older methods altogether.

2. Mistaking effects for causes: Anemia is always secondary. Dropsy never is primary. Pleurisy is always a complication. Haig's hemic uric acid is always secondary. This refers to back ages—we doubt whether many doctors in Hill's day make such mistakes.

3. Overlooking the focus of infection: This certainly is recent and dates from the time when the study of pyorrhea let light into the dark corners. Yet, the true pioneer, the orificial specialist, who saw disease proceeding from the rectal pus-pockets, gets no credit. Hill says that nearly all disease is infectious in origin. Berlin, of Denver, maintains that nephritis comes from bacteremia, while Opie and Adami refer hepatic cirrhosis to colon and pyorrheal toxemias—and let out the alcohol swiller. Just now, the profession is going for pus-foci with the avidity of a chicken after a colony of ants in a chunk of stovewood. We may expect this thing to be pushed to the limit and to absurdity.

4. Disregarding diet and habits: "The evils of improper diet and intemperate habits are universally acknowledged." That's just the trouble—they are so universally acknowledged that nobody pays any attention to them. Let some genius arise, who proclaims that it is wrong to wash, and the world listens to him and remembers him, if it be only to laugh at him. Inattention follows even the brilliant paragraphs with which Corwin seeks to rejuvenate decrepit hygienic maxims. "The etiologic influence of proteins is as evident in nephritis and arteriosclerosis as is that of carbohydrates in diabetes." Diet influences skin diseases; the ingestion of water may improve or worsen urinary troubles; candy caused a suppositious gastric cancer. "Ptomain-poisoning, like rheumatism, is nearly always something else;" usually bacterial food-poisoning, acute indigestion from excess or from incompatible combinations, such as lobster and milk.

5. Neglecting the mechanical factor: The manipulators succeed in cases which the regulars have not fully examined. The feet too often are treated for rheumatism, and the like, instead of being examined for the cause of the pain—which cause may reside in the gums. The most common cause of backache is sacroiliac subluxation. The x-ray and fluoroscope detect many causes of defective motility in the abdomen. "In every part of the body, the mechanical factor may stand forth in clear perspective to the trained observer." Yes, but don't start to whet your knife until the trained observer has really observed.

6. Slighting the reflexes: Hill enumerates several striking instances of these. He considers the prostate gland the most common source of error in diagnosis. When there is rectal and perineal soreness, sacral backache, numb pain in the thighs, dull abdominal pain reaching to or above the umbilicus or sciatica, "as a general rule in an obscure affection in a middle-aged or elderly man, think of the prostate gland." Yes, and don't condemn him to hopeless catheterism or impotence until the existence of prostatic disease and the possibility of its cure have been duly considered.

A generation ago, the reflexes were worked so hard that we "got tired" of them. Every specialist referred everything feesible (Mr. Proofreader, let that alone!) to his pet apparatus. Each looked at sick or ailing humanity through his own private gimlet-hole.

7. Ignoring the psychic factor: Here, Hill gives himself away—he never treated many women of the wealthier classes, else he would not have said that. Only the tyro can, possibly, "overlook our patients' hidden griefs and worries—the pangs of unrequited love, the cares and trials of later life, and the great disillusionments." They won't let us. "The sexual instinct may be rampant or submerged, the traits reminiscent of the lower animals (dog or hog in man, cat and peacock in women) may obtrude obnoxiously." Hill enumerates a list of hysteric phenomena that is interesting, but not as comprehensive as Ellerslie Wallace's—"there is no symptom of any disease, including death itself, that may not be presented by the hysteric."

8. Diagnosis by proxy—letting George do it: The keen-eyed specialist frequently may discover disease that might elude the general practician, but the former is prone to see everything through his own glasses and to ignore or minimize all else but his own pet part of the economy. Looking at the matter from the patient's standpoint, the general practician is absolutely necessary; and he must, indeed, be a diagnostician with "that fine judicial balance which weighs all the evidence and arrives at a conclusion in which every part of the symptom-complex fits in its place like a brick in a house."

9. Diagnosis by predilection—we see the things for which we look, and fail to see the things that are. Not but that the specialists are as honorable as the rest, but human nature is very human.

10. The pathognomonic delusion: Very often error is due to basing the diagnosis upon a single fact. Loss of kneejerks may be due to syphilitic ataxia, but there are at least 30 other conditions in which kneejerks are absent—hysteria and multiple neuritis being most important. "Far be it from me to detract from the prestige of the laboratory-worker, but, in truth and in fact, there is no part of applied medical science in which interpretation of the findings is of greater moment." Many thanks; we have had it rubbed in and been lorded over and squelched by this man until we are grateful for this small comeback. Yet, Hill is not spilling the baby in emptying the bath: "I wish to emphasize the practical utility of a study of the cytology of the stomach-washings as recently practiced by Caussade." "Abderhalden's hypothesis of the protective ferments makes interesting reading, but the actual tests based upon his theories have but little practical value (the test for pregnancy reacting positively with one-third of all the men upon whom it has been tried), and, in short, Herr Professor Abderhalden is about the only laboratory-man who still clings to these tests with unfaltering devotion."

The Wassermann test is another sadly overrated test, nonsyphilitic cases reacting with it positively in the percentage of 2.6 to 18.1. Conflicting reports, even from the same serologist, help to confuse the blind adherent of the method. "If a specimen of blood be submitted to ten serologists, there is one chance in five that the tests will agree. "The Wassermann reaction occurs in malaria, plumbism, tuberculosis, acidosis, diabetic lipemia," so that "a diagnosis of syphilis must not be made upon the Wassermann reaction alone."

11. Names without sense: Etymologically, many misnomers are found, such as malaria, rheumatism, gonorrhea, and many terms in dermatology. "Neurasthenia" means little more than general debility, but "con-

tinues to roll its pentasyllabic length with unctuous euphony from the tongues of most medical men." Ah-h-h! we doff our chapeau to you, Hill—why hadn't we the gumption to perpetrate that sentence! It's a peach.

12. Sheer ignorance: Here, we get the knuckle of the matter—but his kindly heart gets the best of him: "There is so much to learn and to forget in the practice of medicine, that it is no wonder the human mind fails at times to grasp the significance of individual signs and symptoms."

Barely explored as yet is the field in which Kocher, Sajous, and Cushing have worked on the ductless glands and animal-extract therapy. Slight variations from normal equilibrium are likely to escape attention in the present general ignorance about this province. "When a thorough knowledge of the functions and interactions of these glands becomes an essential part of medical science, the physician will be able to play the harmonies of health upon the keys of life as never before. I further believe that quite possibly the control of the cell-anarchy yclept cancer lies in the study of these glands."

Rarely do we meet a paper so full of useful suggestions as this one; and it is just these rare papers that make it worth one's while to wade through the many dull pages of many stupid publications.

Good when the bugles are ranting
  It is to be iron and fire.
Good to be oak in the foray—
  Ice at a guilty desire.
But, when the battle is over
  (Marvel and wonder the while).
Give to a woman a woman's
  Heart and a child's to a child.

—O. Henry.

HOW SHOULD EXOPHTHALMIC GOITER BE TREATED?

Doctor Bryce, in *The Southern Clinic*, asked for suggestions as to the treatment of exophthalmic goiter, and the numerous responses received not only show a curious diversity of views regarding this condition, but also a no less strange faith of the writers in various methods of treatment. As a picture of the stand occupied by many of the profession, as a showing of the various ways taken to reach the same result, the following condensed survey of these suggestions may be of interest:

Rebuild the nerve-capital; enrich the blood; diet, exercise, and so forth; hypophosphites, glycerophosphates, organic iron, digestants; cardiotonics as needed. Forget the goiter and treat the girl.—Henry Borst.

Abrams' spondylotherapy.—W. E. Gault.

Asafetida, iron iodide, liberal diet, rest.—S. W. Dickinson.

Potassium iodide vigorously pushed, massage of thyroid gland with iodine-ointment; operation of thyroid gland.—Chas. C. Boyce.

Early partial removal of the gland.—Hall Whiteley.

Sodium salicylate, varying with elixir of gentian; iodine locally and alternated with ammoniated mercury; vibrator applied to the gland and spine.—M. H. Stuart.

Lycopus virginica, also cathartics.—J. T. Potter.

Lycopus and fucus vesiculosus; cratægus early for the cardiac excitement.—I. N. Paul.

Blaud's pills between the catamenia, and Fowler's solution during the same; iodine applied over the ovaries; dilate the uterine cervix, also curette the womb, if need be; cactina, to slow the pulse.—E. O. Bingham.

Potassium iodide internally, iodine externally; actual cautery of the hypertrophied mucosa of the nasal septum and turbinates.—C. Carter Lee.

Hydrogen iodide and thyroid extract alternated month for month; iodine locally; digitalis, ergot, strychnine, iron arsenate for three to six months.—J. F. Alexander.

But one cure satisfactory and certain, to wit, operation.—Clarence A. McWilliams.

Thyroidectin.—C. E. Palmer.

High-frequency current.—D. C. Huffman.

Quinine hydrobromide.—W. E. Regier.

All cases are surgical.—W. D. Jones.

Correct the ocular-muscle strain that causes the goiter.—Anonymous.

Red mercuric oxide, in the form of ointment, 2 grains in 1 ounce of petrolatum rubbed in over the enlarged glands.—Perry Engle.

Overcorrect hyperopia; diet of fruit; hot baths.—Charles McCormick.

Digitalis, strychnine, ergot, iron arsenate; aspirin; faradism; operation in the few cases where this drug-therapy fails.—John North.

Inject, daily, 5 to 10 drops of hot water into the enlarged gland; iodine and mercury rubbed in over the gland; thyroid extract, chromium sulphate, potassium iodide; look for a cystic ovary; ligation or extirpation of one lobe of the gland.—E. L. Haffner.

Chloral and aconite; potassium chlorate paste applied to the back and sides of the neck.—R. H. Porter.

With all this heterogeneous array of professional advice, it is singularly odd that not one of these writers even as much as men-

tioned the advisability of keeping the patient's bowels clear and clean; yet, one of the best-established facts about exophthalmic goiter is that sometimes it depends upon fecal toxemia. Otherwise, the variety of recommendations may be ascribed to the very natural tendency of men to place stress upon their personal experience and to advise remedies that succeeded with their own patients. Hence it is, that we are not surprised to find quinine recommended by practitioners of the malarial South or that it may fail in non-malarial regions. However, that quinine does often cure these cases in our northern cities is supported by the experience of such good men as Forchheimer.

May we not hope that readers of CLINICAL MEDICINE will throw more light on the subject.

Many years of experience have taught me that no local treatment in the urethra or bladder should be given unless the patient has his intestinal tract thoroughly cleaned out.—Victor G. Vecki.

A METHOD OF SECURING BLADDER ASEPSIS

The fear of a "catheter-life," which so frequently is met in old men—more particularly in elderly physicians—is one that has found more than complete justification through sad experiences, when regular catheterization had become necessary, despite all precautions and the most rigid cleanliness. Seemingly it is practically impossible to avoid infection and subsequent cystitis once the catheter has become a daily necessity. This infection is rendered the more serious because of the fact that usually the amount of residual urine is considerable in cases of senile hypertrophy of the prostatic gland; and it is in these cases, when retention does occur, that cystitis is particularly frequent.

In view of the fact that bladder infection is a common and serious cause of death, any method by which this condition may be prevented must be welcomed, and in *The Urologic and Cutaneous Review* for June, 1916, Dr. Abraham Nelken describes a very simple method, with striking results, that he has been employing for this purpose. His procedure consists in emptying the bladder with a catheter two or three times a day, and then, either with or without preliminary irrigation, injecting and leaving in 1 or 2 ounces of a warm saturated solution of boric acid. It is evident that, since the patient never entirely empties the bladder, no matter how frequently he urinates, there always will be retained in it some of the solution. While the strength of this solution is constantly being diminished by added urine, the injections are repeated with sufficient frequency to maintain the antiseptic action of the boric acid. Other antiseptics probably will answer the same purpose. Still, boric acid, because of its nonirritating qualities and the fact that it tends to neutralize or acidify the alkaline urine of the bladder, appears to Doctor Nelken to offer certain advantages, and his results have been so satisfactory that he has not tried out any other preparation.

Once the urine has been acidified by the boric-acid solution, the administration of hexamethylenamine by mouth, as an adjunct to the treatment, would seem logical. In one case, he has tried hexamethylenamine in conjunction with the boric-acid injection, but the patient complained of considerable vesical irritation, so, the combination was discontinued. It is possible that the highly acid urine, owing to the presence of the boric acid, produced so much free formaldehyde as to cause disturbance of the bladder and that a considerably smaller dose of hexamethylenamine than that usually employed should be administered. It seems logical, likewise, to assume that, once the urine in the bladder had been rendered sterile by means of the boric-acid injections, they might be discontinued and thereafter the aseptic condition be maintained, despite the constant presence of residual urine, by the administration of hexamethylenamine in sufficient dosage.

Possibilities are merely the half-hearted efforts of quitters.—Herbert Kaufman.

DRUGS NOT TRUE TO LABEL

One of the readers of CLINICAL MEDICINE sends us a clipping of an article contributed by Dr. W. A. Evans, of Chicago, to his department in *The Chicago Tribune* and a syndicated group of newspapers. The title of this article is "Drugs Not True to Label." There is so much food for thought in Doctor Evans' article that we reproduce it here in its entirety.

"Here is another reason why you should not dope yourself with medicine. There is almost an even chance that you will not get what you pay for. What you get may be just as good, but the probability is, that it is not. It may do you no harm, but even if it does not you have been cheated.

"In Kansas, Congdon found that 52 percent of the 393 samples of drugs were re-

jected because they were not true to label. Lythgoe found that only 14 percent of 1,393 Massachusetts samples were to be rejected.

"The chances of getting drugs not true to label in three other states were as follows: Indiana (Barnard), 35.5 percent; Iowa (Newcomb), 30.2 percent; Michigan (Todd), 37.5 percent. Conditions are not worse in these states than in others. The probability is, that a man in Illinois or a man in New York will not get drugs as pure as will a man in Indiana or one in Massachusetts, as Wilbert says that Indiana, Iowa, Massachusetts, Kansas, and Michigan are leaders in food- and drug-law enforcement. Therefore, the chance of getting good drugs in those states is relatively good.

"Some drugs are more frequently adulterated than others. In this list, diluted hydrochloric acid led the list; 63.2 percent of the samples examined were rejected as spurious. Others' percentages were: Ammonia-water, 62.1; sweet spirit of niter, 61.2; tincture of belladonna, 77.3; tincture of ginger, 60.8; Fowler's solution, 58.1; spirit of peppermint, 55.4; tincture of aconite, 52.1; tincture of iron, 52.3.

"When a person buys tincture of iron or sweet spirit of niter or Fowler's solution or any other of the old standbys listed above, he does not stand an even chance of getting what he pays for.

"Other old standbys that are adulterated or weak about half the time are: camphor-liniment, spirit of camphor, tincture of iodine, and zinc-ointment.

"The strength of different drugs varied widely. Some samples of aconite-tincture contained four times as much of this active drug as did others. The strength of the different preparations was supposed to be the same. Some other variations were as follows: Asafetida, the strongest, 47 times as strong as the weakest; belladonna (a most powerful drug), 20 to 1; hyoscyamus (most powerful), nearly 300 to 1; ipecac, 3 to 1; jalap, 4 to 1. Maybe the last item explains why sometimes jalap powder "tears one to pieces" and sometimes it has no effect.

"Nearly one-fourth the samples of laudanum were rejected. Wilbert says that lime-water, peroxide of hydrogen, and distilled extract of witchhazel, articles which have been frequently reported on in recent years, are not usually up to the standard.

"There is very little argument for the promiscuous taking of medicine. The man who takes one dose a year will outlive him who takes a thousand. Right living will prevent most of the body's ills. Sunlight, air, and rest will cure many of them. On top of the other arguments against promiscuous taking of medicine, is the fact that so large a proportion of the medicines sold are unreliable."

Do not construe this article as an attack upon the pharmacist. We are sure that Doctor Evans did not so intend it, and we should not reproduce it if we believed it would be interpreted in this way by our readers. The druggist, in the vast majority of cases, is a square, honorable business man, using the tools of his trade and dispensing his merchandise with ability, honor, and usually with discretion. He can no more be held responsible for the variability of the products which he sells than can the shoemaker or grocer or any other merchant for his respective line of goods.

The trouble is not with the man; it is with the drugs which he is called upon to sell, many of which, as Doctor Evans has so clearly shown, are, from their very nature, variable as to strength and purity. Many of the drugs which he purchases are particularly prone to decomposition. Others are sensitive to heat, light or other influences; while those galenicals that contain alcohol are affected by evaporation. And, finally, the drug-merchant is at the mercy of the houses that supply the goods; for, it is absolutely impossible for the pharmacist to make chemical or physiological assays of every tincture, fluid extract or mixture which he places upon his shelves.

The moral of this disclosure is, that physicians should use medicinal agents that are not prone to undergo these changes, that are uniform in strength, potent, and capable of preservation for a reasonable length of time. These requirements practically are met by all the alkaloids and most of the other active principles. If properly prepared and properly packaged, the majority of them will keep for years with activity unimpaired. Hyoscyamus is an exceedingly sensitive and variable substance, but hyoscyamine and atropine are alkaloids that do not readily change and which can be depended upon even after granules and tablets containing them have been kept for years.

To put the thing in a nutshell: Doctor Evans' article is one of the best arguments we have seen for the use of the active principles.

There can be no gainsaying the wisdom of his advice to laymen against self-medication which usually is useless, often injurious.

Leading Artieles

Bedside Directions for the Treatment of Acute Lobar Pneumonia

By Solomon SolisCohen, M. D., Philadelphia, Pennsylvania

Professor of Clinical Medicine in the Jefferson Medical College

EDITORIAL NOTE.—It is with much pleasure that we present to our readers this discussion of the deliberate active treatment of acute lobar pneumonia recommended by the author, who is one of the leading therapeutists today. His encouragement of active treatment will go far toward negating the harm wrought by the adherents of expectant, that is to say, do-nothing treatment.

On Admission

AFTER pulse, temperature, and respiration have been recorded together with the blood pressure, both systolic and diastolic; after due arrangements have been made for proper supply of *fresh air;* after the patient has had a preliminary *cleansing sponge* or *bath* followed by a *hot-alcohol rub*, and his chest has either been wrapped up in a lamb's-wool or cotton-batting *jacket*—this sometimes being preceded by a *mild mustard poultice*—or a *hot flaxseed poultice* has been applied;[1] and after a preliminary dose (5 grains) of *calomel* has been given; the administration of *quinine and urea hydrochloride* and *pressor agents*—intramuscularly, if possible—is at once instituted.

Quinine and Urea Hydrochloride

According to the severity of the case and especially the height of the temperature, the first injection of the quinine compound, is from 10 to 25 grains (0.6 to 1.5 Gram). The second injection, made three hours later, should not be more than 15 grains (1 Gram) nor should any injection be given if the temperature has by this time fallen to 102° F. or less. The signal for renewing the injection is failure of temperature to fall, or a rise of temperature, later, to 103° F. To put it differently: the injections (10 to 15 grains) are *repeated every third hour until the temperature falls to 102° F. or less.* and then are *intermitted until the temperature rises again to 103° F. or more,* and then *repeated as indicated.* If, however, the desired fall has not been reached by the time that *four* or at most *five* injections (*i. e.* 50 to 90 grains of quinine and urea hydrochloride) have been given, the interval is increased to six hours or even more, according to circumstances. Any sign of untoward cinchonism should cause immediate interruption of the quinine injections. Such sign would be tinnitus aurium, dimness of vision or persistent sweating. In more than 500 cases, I know of only two instances, however, in which cinchonism has occured; and hence, while it is to be watched for, it is not ordinarily to be apprehended.

Certain *precautions* are necessary in the administration of the quinine and urea salt.

The solution (50-percent to 30-percent) is to be made *extemporaneously* in boiling water, so that a syringeful (about 20 to 30 minims, say, 2 mils (Cc.) contains the full dose to be given—10 to 25 grains (0.6 to 1.6 Gram). It is convenient to have in the ward ready prepared papers or capsules containing 10 and 15 grains (0.6 and 1 Gram), respectively—the contents to be dissolved in a syringeful of boiling water and so used. The antiseptic routine must, of course, be followed strictly.

The skin of the site selected for injection (posterior or exterior aspect of arm, thigh, shoulder) should be painted with tincture of iodine; the needle is plunged deeply through the iodized skin into the muscle and then emptied. In withdrawing the needle, care is to be taken that a drop of solution does not fall on the skin. The puncture is to be

[1] When practicable, the following routine is useful: (1) *Counterirritate* with a 50-percent mustard poultice mitigated with egg-white and glycerin, for sixty to ninety minutes. (2) *Cleanse* site of irritation with warm alcohol. (3) *Anoint* with vaseline. (4) *Wrap up* for one hour in lambs' wool. (5) Then apply a *jacket-poultice* of hot flaxseed paste *well made*, between two layers of cheesecloth. This is to be changed for a fresh poultice in four hours, and should keep hot for this time. *During the day*, apply a fresh poultice every four hours. *At night, to avoid disturbance of sleep*, substitute the lambs' wool.

sealed with collodion. Necrosis and abscess are thus avoided.

Quinine by Mouth.—When it is impracticable to administer the quinine and urea compound by intramuscular injection, oral administration may be substituted; but it is far less effective. The doses should be increased by at least 50 percent, or the same quantity (10 to 15 grains—0.6 to 1 Gram) be administered every two or three hours in a routine way, irrespective of temperature, but with care, to avoid cinchonism. The exact dose will depend upon the severity of the symptoms. In some cases, oral doses of 5 grains (0.3 Gm.) every 3 hours, or even thrice daily, may be sufficient after a full initial dose by muscle or by mouth.

Other quinine salts may be used but are less effective; unless the dihydrobromide should sustain in clinical use certain exceptional qualities shown in experimental observations by the author and Dr. J. A. Kolmer, to be published in the Transactions of the American Association of Physicians for 1916.

Duration of Treatment.—The use of quinine —especially by injection—is not usually kept up for more than seventy-two hours. This is a question of judgment in the individual case. *Tincture of ferric chloride* or *Basham's mixture*, with or without *strychnine*, is then to be given.

Total Quantity of Quinine and Urea Hydrochloride.—In many cases, a single injection is sufficient. In others, as many as ten or more may be required. Commonly, three or four will suffice. When quinine is given by mouth, a larger dose and a larger number of doses are often needed; hence, a larger total quantity. The drug must be used *promptly*; and *enough, but no more*, is to be given. The *first few doses must be large*; the later ones may be smaller.

Purgatives and Enemas

The preliminary dose of *calomel* is to be followed by *magnesium sulphate*. After this, a *daily laxative saline enema* is to be given; or, if circumstances render it more desirable, a suitable saline aperient may be administered regularly.

Pressor Agents

Cocaine hydrochloride (1-2 grain) or a *liquid posterior-pituitary preparation* (pituitary liquid or solution, pituitrin, infundibulin, hypophysin—commercial ampule of 1 mil(Cc.) should be injected into a muscle (or given by mouth in double dose) with the first dose of quinine. Oral administration is far less effective than the injection.

After that, the relation between pulse frequency and systolic blood pressure governs repetition of the dose. *It is to be repeated every third hour so long as, and whenever, the pulse frequency in beats per minute, exceeds the systolic pressure in millimeters of mercury* (Gibson pulse and pressure ratio); or whenever, irrespective of pulse frequency, there is *a persistent tendency for systolic pressure to sink to or below 90 to 100 mm. Hg.* If third-hourly administration is ineffective, the interval may be shortened; or, cocaine and pituitrin may be alternated every second hour, or even every third hour. Sometimes it is well to give *camphorated oil* (20 to 30 minims of a 20-percent sterile solution) along with the cocaine and pituitary liquid—one or the other every hour; that is to say, each of them every third hour.

Solution of *adrenalin hydrochloride* 1 : 1000 (1 mil) may be injected occasionally in place of pituitrin. It is inert by the mouth. When there is a tendency to *tympanites*, the pituitary preparation should be given hourly, for at least three hours in succession; after which, *if necessary*, it may be alternated, at 2-hour intervals, with a few doses of *eserine salicylate* (1-60 grain). Here, too, the frequency, dose, and total number of injections must be a question of judgment, according to effect in any given case.

If there is occasion to use *hypodermoclysis* or *angioclysis*, the pituitary extract or adrenalin may be added to the saline solution.

When the blood-pressure measuring instrument is not used, the *force* of the *pulse* and its *volume*, together with the *sounds* of the *heart* (as to both *force* and *clarity*) must be the guide in administration of pressor agents. *Overstimulation is to be avoided* but needed stimulation and support must be given.

Cardiants

While *aconite* and *veratrum viride* may be useful at the very inception of an attack of lobar pneumonia, *they can only do harm after crepitus has disappeared and bronchial breathing supervenes*. *Digitalis* is then to be used, if necessary. The preparations now most used by the writer are Cloetta's *digalen* and *Lloyd's energetic digitalis* or *Lloyd's specific medicine digitalis*. The last named preparation is for oral administration; the other two are given hypodermically. However, the physician may use any other preparation—U. S. P., Merck's, Abbott's, and so on, and so forth—that he prefers and understands,.

The dose must be large; at least 15 or 20 minims of digalen and from 5 to 10 minims

or more of Lloyd's energetic digitalis (which is said to be 1-2 the strength of the U. S. P. fluid extract), according to the patient's reaction. The *interval* between injections commonly is four hours. If repeated injections are not feasible, or if they seem undesirable, Lloyds specific medicine digitalis may be given *by mouth* in doses of from 3 to 10 minims, well diluted, every hour or two, to keep up the effect after the first injection. Or the U. S. P. tincture or fluid extract may be employed similarly in doses of not less than 10 minims of the former or 2 minims of the latter. Very much larger doses may be given in individual cases, with due regard of course, to intervals. The larger the quantity, the longer the interval must be. Necessarily, *the effects must be watched* and the dose and interval increased or diminished, according to the *result* in a given case.

The *indication* for digitalis is, *wobbling of the pulse* or a *fall of diastolic blood pressure to 60 mm. Hg. or less;* especially if that brings it to *within 10 points of the respiration rate* (in excursions per minute; — author's *pressure and respiration* ratio). *Digitalis results are slow to appear, but are much more prompt and positive when quinine is given than in its absence.* Here, also, good judgment is needed, both in giving and in withdrawing or intermitting the drug.

(Experienced physicians may be able to estimate the circulatory condition by the palpating fingers—but "feeliug the pulse" is fast becoming one of the lost arts. Hence directions are given in terms of instrumental measurement. The *diastolic pressure* is the "arterial tension" *between beats;* indicative of the tone of the relaxed heart and of the great vessels, as well as that of the peripheral artery. The *systolic pressure* is the *"force of the beat."*)

Venesection, Venoaspiration, or wet cupping may be called for, additionally, when there are signs of *dilatation of the right heart;* and especially if *pulmonary edema* is present or imminent.

Water, Chlorides, Alkaline Salts

A sufficient intake of chlorides and of alkaline salts should be provided for.

Hypodermoclysis of 250 to 1000 mils of saline solution or of a modified saline solution [*sodium chloride,* 45 grains, (3 Gram); *crystallized calcium chloride C. P.,* 3 grains (0.2. Gram); *ammonium chloride,* 7 1-2 grains (0.5 Gram); dissolved in 1 pint (500 mils) of sterile water] may be given, according to Henry's plan, as a routine, daily or even twice daily; or may be reserved, as in the writer's practice, for specially toxic individuals or those who will not or can not drink sufficient of the alkaline-saline beverage he prescribes or of Quimby's chloride mixture. Or the *Murphy drip* (proctoclysis, 30 drops to the minute) may be used.

The writer's alkaline-saline beverage is made by dissolving in a glass of hot or cold water (as most agreeable to the patient) *sodium phosphate,* 5 grains; *sodium chloride,* 10 grains; *sodium bicarbonate,* 10 grains. A glassful, more or less, of this is given hourly if possible, or at least every two hours. If too salty or too soda-like, the proportions may be altered or the quantities reduced. A few drops of *lemon-juice* may be added, to cause effervescence and improve the taste. Sugar may also be added, occasionally, if the patient finds the drink improved thereby. If alcohol is to be given, whisky or brandy may be added.

Quimby's chloride mixture consists of about 10 grains of *ammonium chloride,* 5 grains of *sodium chloride,* and 1 grain of *calcium chloride,* in a glassful of water. Doctor Quimby gives it hourly. The proportions and quantities may be varied, if necessary. This may be alternated with the alkaline-saline beverage, if found more palatable.

The general idea is: (1) to give *plenty of water* and thus keep up the urinary output to at least 2000 mils (70 ounces) daily; (2) to give *chlorides in sufficient quantity*—at least 60 grains (4 Grams) each twenty-four hours; and (3) to *keep the urine alkaline or neutral.* Accordingly, litmus-paper is given to the nurse, who is instructed to test the urine each time it is passed, and to increase the ammonium salt or the sodium bicarbonate whenever the blue paper turns distinctly red.

Food

Liquid or *semisolid nourishment* is to be preferred—perhaps predigested; thus, pancreatized milk, peptonized milk-gruel, Benger's or Mellin's food, raw or soft-boiled eggs, junket, custard, soups, barley-broth, beef-juice, peptonized beef, albumen-water, and, *if necessary,* whisky or brandy. In the case of alcoholic subjects, alcohol in moderate quantity is needed. They may be reformed later. They should also receive, as a stimulating eliminant, 1 ounce hourly of *solution of ammonium acetate,* and the other treatment be modified accordingly. Nonalcoholic patients may be benefited by alcohol in the later stages (fourth to ninth day) should the symptoms in general seem to call for it; and especially

when fever continues high despite the quinine. Here also, general rules are impossible. It is a question of *good judgment at each visit.*

Fresh Air

A roof or porch is preferable to a room; a big high-ceilinged room to a small, low-ceilinged one; many windows to few openings. Windows should be kept open top and bottom, the patient being screened from draughts. There should be plenty of bed-covers. The mattress should be covered, both top and bottom, with paper or a rubber sheet or mackintosh, to exclude the cold air that comes up from below and easily penetrates the ordinary mattress. Over this a blanket should be placed and then a sheet. Hot bottles and the like may be used to keep the air beneath the bedcoverings warm. For robust young people, cold air is desirable outside the covers. Old folks and delicate children *need warm air* (65° to 80° F.) as well as fresh air. So do alcoholics.

Oxygen—warmed, if necessary—may be reserved for emergencies. If used, it must not be expended economically. Continuous or almost continuous inhalation for twenty-four to forty-eight hours is necessary, if its use is called for at all. Oxygen prepared *extemporaneously* from sodium peroxide cartridges by means of Doctor von Foregger's "oxone"-apparatus is most easily managed; is most promptly accessible, except in large cities; and is best anywhere.

Nursing must be continuous, careful, and intelligent. All the details that come under this head—system, cleanliness, disinfection, quiet, rest, avoidance of unnecessary disturbance, must be scrupulously observed.

Delayed Convalescence. Bacterins

If resolution is proceeding normally, as shown by the crepitus reductus, and the like, a simple tonic of iron or of iron and strychnine or of iron, strychnine, and quinine may be all that is needed. A very good formula is the following: *Dilute phosphoric acid*, 4 fluid drams; *tincture of ferric chloride*, 3 fluid drams; *strychnine sulphate*, 1-2 grain; (*quinine phosphate*, 16 grains;) *essence of pepsin*, or *aromatic elixir*, 2 fluid ounces; *water*, sufficient to make 4 fluid ounces. Dose: 2 teaspoonfuls in water, sucked through a tube, three or four times daily.

If, however, notwithstanding the subsidence of temperature and the restoration of normal respiration rate, resolution does not set in, the administration of a *bacterin* is desirable. This should preferably be made of a culture obtained from the sputum or blood of the patient (so-called autogenous vaccine). The initial dose is 25 millions or 50 millions of killed pneumococci, and this is to be increased at successive doses by 25 millions, 50 millions, 100 millions or more, according to the reaction of the patient, as shown by temperature, by leukocytosis (and especially phagocytosis), as well as by focal symptoms. Commonly three doses may be given in daily succession before reaction is evident. Thereupon one waits from three to seven days, until the reaction subsides, and repeats the injection, but in increased dose. Both time and quantity vary considerably with the individual patient, so that no uniform rule can be laid down.

Good results may be obtained from *oral* administration of the bacterin (vaccine) in about 1 ounce of normal saline solution, as well as from the ordinary method of subcutaneous or intramuscular injection. The preferable *time* for administration of killed bacteria by the mouth is before breakfast, as the dose is absorbed more readily from the empty stomach. Normal serum sometimes is a better vehicle than is salt-water; or a teaspoonful of (pressed) beef-juice in 2 ounces of salt-solution may be used instead.

When not only resolution is delayed, but fever and disturbed respiration persist unduly, the bacterin-treatment is also of considerable service.

Auxiliary measures, such as the use of *opium*, *strychnine* or *atropine*, may be resorted to, if needed; but are commonly unnecessary.

Disinfection of the upper respiratory tract—by applications of *argyrol solution* (20-percent) or of *phenol-iodine* (*phenol*, *iodine*, each 3 grains; *menthol*, 1 grain; *glycerin*, 1 fluid ounce) to the nasal mucosa; by spraying the nose and throat with *aromatic and phenolated oily solutions;* by *continuous inhalation* of *creosote*, *eucalyptol* and *bromoform* from a Yeo (perforated zinc) respirator; by *gargling* with *sodiumperborate* solution or *succinic-dioxide* solution; and like expedients, are useful. The particular measure or measures to be employed will depend on practicability and the general condition of the patient. Unnecessary disturbance is to be avoided.

Malignant Icterus of the Newborn*

By Abraham R. Hollender, Ph., B., M. D., Chicago, Illinois

ICTERUS is so common among the newborn as to be considered a natural condition, and ordinarily lasts but a few days. The usual type of the disease is very mild and calls for little medical attention. It is the type that increases in intensity and persists for a period after the end of ten days or two weeks which concerns us most, and which, in fact, has become an important problem for any physician doing obstetrical work. Authorities have termed the severe form of icterus "malignant icterus," "grave infantile jaundice," and a number of other names intended to indicate the severity of the disease.

Correctly speaking, "icterus neonatorum" of the malignant type is not a true icteric condition. This has been proved conclusively by showing that sepsis is the all-important predominating etiological factor. In dealing then, with malignant icterus, the physician is actually dealing with a sepsis or a toxemia in the newborn. That this is a condition far different from icterus, which is commonly treated as a symptom, is obvious.

Simple, or benign, icterus is marked by a general yellow staining of the skin, usually appearing about the second day after birth. The skin seems to be chiefly affected, there being no evidences in the conjunctivas or secretions; nor are there any special symptoms. The only essential point worth remembering is that there may be some disturbances of nutrition and a check of growth. Heretofore, the liver was looked to as the source of this yellow staining, but investigations have not been successful in showing that there are any local liver disturbances in this form of icterus. The tendency in investigations has been to attribute the trouble to blood changes in the skin, and those who know the subject are willing to accept this theory, until it is discredited. This means that constitutional treatment in simple icterus is contraindicated and frequently leads to the production of considerable damage.

The promiscuous employment of calomel and certain other drugs in all ailments of the newborn and in early infancy, and especially in the ailment in question, is unjustified and calls for clearer and more accurate diagnosis in the future. As a general rule, no medication is indicated and the only treatment to be ordered is, more frequent warm bathing and the administration of comparatively larger quantities of water than are usually given to a newborn infant.

The malignant icterus is unquestionably of toxic origin, directly or indirectly. The old theory of patulous ductus venosus, allowing the portal blood, laden with bile, to enter the circulation, is not well founded. Our attention seems to be directed more to such factors as insuperable obstructions, septic phlebitis of the umbilical vein, for instance, or, some less frequent cause, such as syphilitic hepatitis.

Experiments on the Cause of Icterus Neonatorum

In a series of 100 infants delivered by two of my colleagues and myself in one of the hospitals of this city, an experimental study was undertaken, to determine some of the causes of icterus. The work was pursued with a view to proving the theory that many of the cases are due to infection of the cord-stump immediately after birth. Every possible caution was taken to prevent infection of the cord-stump. The following table shows the results obtained:

Cases of no Icterus	Cases of Simple Icterus	Cases of Malignant Icterus	Mortality on Account of Icterus	Mortality for Other Causes	Case of Anomalies
23	76	1	0	3	2

This study does not indicate any final findings, but is mentioned in order to give the writer's view, that malignant icterus is due to infection from without, usually of the cord-stump: and, second, to urge further investigation along these lines, to disprove the present belief of complicated constitutional derangements that would call for different treatment.

The writer does not wish to convey the impression that malignant icterus is of common occurrence. It is, however, a condition that has attracted comparatively little attention, on account of its infrequency, but which can be prevented by proper prophylaxis.

The other causes of icterus are not considered here. The average textbook on obstetrics or pediatrics goes into this

*Paper read before the North Chicago Hospital Clinical Society.

phase at length and there seems to be little variation in the opinions. The literature suggests early tying of the cord as a probable preventive factor of icterus. In the cases referred to, not a single one of icterus was prevented by this precaution, and the utmost care was exercised in carrying out this direction for a test.

With reference to the changes in other organs, more than one author states that the liver and spleen are enlarged in all types of icterus. I did not find this to be true at all in simple icterus, while in the single case of the grave form of the disease no definite findings in this connection could be determined.

The prophylaxis already spoken of is the best treatment of toxic icterus. Too much care cannot be taken to prevent infections of the cord, skin, eyes, and mucous membranes.

When the disease does present itself, a serious problem confronts the attending physician. The treatment and management does not include the administration of calomel or castor-oil. The pediatrician who advises such measures has not acquainted himself thoroughly with the character which this ailment assumes. The infant is in a state of toxemia and must be treated accordingly.

Medication is contraindicated. Two flushings daily, warm bathing, warm clothing, the most careful feeding at regular intervals, as a supportive measure, are the only points that require attention. When the infection has not entered too far inward, the cord-stump may be cut off as close as possible and tied again. The giving of slight inhalations of pure oxygen has been known to be of benefit.

I know of two instances in which calomel was administered in very minute doses. Both proved fatal. I know of one severe case, which occurred about five months ago, and in which the babe was saved. The attending physician employed the measures previously recommended and gave as a supportive treatment small doses of brandy-water. No medicine was administered.

Summary

1. Cases of simple and of malignant icterus, although rare, occur at times, and they present difficult problems of management.

2. Toxemia, or sepsis, as the predominating etiological factor has not been considered hitherto; but, instead, the trouble is laid to biliary anomalies, obstructions, and other phenomena; sepsis being treated as a secondary factor.

3. Simple icterus is a natural occurrence and requires no treatment.

4. The grave type of icterus requires proper management, but no medication. Calomel is contraindicated.

5. Prophylaxis, by preventing cord-stump infections and phlebitis, is of vital importance and should always be borne in mind by the obstetrician.

Symptomatic Therapy

By H. Schroer, M. D., Cincinnati, Ohio

EDITORIAL NOTE.—Doctor Schroer's speculations concerning disease and its treatment are ingenious. Unfortunately, they lead him to conclusions in which we cannot always follow him. If we print his article, even though differing with him in some respects, we do so because we are not adverse to yielding the floor to exponents of opinions not in agreement with our own. We have commented upon Doctor Schroer's views in an editorial appearing in our editorial department on page 91.

ANNIHILATION of individual existence is one of the most commonplace phenomena coming under observation. Physical reactions of whatever kind are an expression of the struggle to maintain this individuality. The term individuality means a distinct living molecular group in equilibrium, and the efforts to maintain this equilibrium give rise to the phenomena of the universe as we know them. Life is a "continual adjustment of internal relations to external relations" (Spencer), and, although these adjustments are not so apparent in inanimate objects, nevertheless, they exist. Individuality will be maintained as long as the physicochemical factors giving rise to it are unaltered; yet, adjustment to a certain variability of physicochemical factors is possible and necessary. Go beyond the possible limit, in either direction, and there must take place a redisposition, with loss (or change) of individuality. Paper thrown into fire loses its individuality as paper, because its integrity cannot be maintained at the temperature of fire and then a new formation of compounds (rearrangement of atoms) occurs, which new aggregations have lost all the characteristics of paper. Structural stability is the reverse of differ-

entiation, but no matter how stable ordinarily a compound may be, physical conditions can be brought to bear to which it cannot adjust itself, and, yet, maintain its integrity.

The Problems of Life and Disease

The physician's concern in problems of this character is, the study of factors that jeopardize the individuality of the body; to avert them if possible; to aid the body in defense when evasion is not possible. Human life in its widest aspects—social, economic, political—is the outward expression of the attempt of the unit to maintain its individuality and to bring about conditions calculated to render more easy these efforts.

As agriculture is "the foundation of the nation's strength and prosperity," so is medicine the foundation of the individual's strength and prosperity—and, would that it were capable of meeting satisfactorily all demands made upon it.

The body is a highly differentiated chemical group, the integrity of which is maintained only with greatest difficulty under the harrowing conditions imposed by civilization. That the individual of the present day is overfed and underexercised, any physician can testify to. That many metabolic diseases are brought on by a complicated and excessive dietary that requires new cellular adjustments and results in the accumulation of byproducts that can not be thrown off, also is a matter of observation. That infectious disease finds a ready culture-ground in a body whose integrity has been disturbed by frantic efforts to live up to the artificial standards of modern civilization is merely to expatiate on the obvious.

The Function of the Physician

The function of the physician is to restore the sick body to equilibrium or to cooperate in such a way that its own efforts are facilitated and expedited. These efforts on the part of the physician have given rise to the use of substances known as medicines. But, medicinal agents vary in complexity of composition. From mud from the street to the most complicated organic preparations. these remedies are designed to suppress symptoms; unfortunately those which are intended to strike at the root of the disease fail, with but few exceptions, to strike an effective blow.

Symptoms, as exhibited by a diseased body, are expressions of offense or defense. In tetanus, poliomyelitis. strychnine-poisoning, the offensive rules the clinical picture. In pneumonia, tuberculosis, typhoid fever, and in most metabolic and infectious diseases, the defensive reactions predominate. The question for solution—and one which has been much neglected—is, to determine what symptoms are defensive and which symptoms are offensive, what symptoms should be suppressed and which of them should be accentuated.

Drugs in Pneumonia

Many practitioners "keep up the heart" in pneumonia, when, as a matter of fact. the heart is keeping up to the limit and the addition of stimulants very often only makes it give up in despair—and the patient dies of "pneumonia." Expectorants, also, are given, because the reaction caused by the pneumococcus is of a higher degree, calling for the transudation of cells into the bronchi and alveoli, while the transudation of fluid, as a result of the expectorant, is of a much lower degree of irritation. Consequently, the fluid expelled into the bronchi will carry into solution the cells thrown out in response to a most powerful irritant. For some unexplained reason, expectorants do not act as expected. The pneumococcus is a powerful irritant, and the body blindly throws cells into the lung-channels, in its effort to neutralize this irritant, by feeding it cells that are not functionally active and, thus, prevent action of functionally active cells.

The body's defense is blindly mechanical. There is no intelligence either in connective-tissue cells or in phagocytes. And there is no intelligence in the signally defective oxidation because of the abrogation of lung function by the pneumonia-process. The heart blindly responds, and, if some physicians believe that strychnine furnishes this organ with potential energy that enables it to work better and faster, they may so believe. The difference in the equilibric standards of body-cell and pneumococcus must be neutralized. Then pneumonia will be aborted—not before—and this difference must be worked out in the laboratory.

Concerning Poliomyelitis

Then there is poliomyelitis anterior, a disease given much newspaper publicity. This pathologic condition is due either to a circulating endolysin possessing a selective affinity for capillary tissue in the anterior horns of the cord or to a neurotoxin having a selective affinity for motor cells in the cord

If it is simple pressure-atrophy produced by hemorrhagic extravasation, then why do not multiple hemorrhages occur in other por-

tions of the body? The answer is: For the reason that there is a neurotoxin with a selective affinity for motor cells in the capillaries, and the apposition of cell and circulating toxin means satisfaction of affinity and rupture of the capillary wall in the process. The satisfaction of affinity annihilates the integrity of the motor cell, and areas of nerve distribution suffer in consequence.

Therapy is a failure so far as removing the toxin from the cell is concerned. Various remedies of uncertain action are recommended —just why, no one seems to know. If the selective affinity of the neurotoxin could be diverted to an injected agent that would hold neurotoxin in a neutralizing combination or even pull the neurotoxin out of combination with the motor cell, therapy no longer would be merely symptomatic.

Why Malignant Growths Kill

Neoplasms are infective in origin and the average patient dies from the effort of defending himself, rather than from the offensive reaction of the malignant growth. If it were possible to modify the cells contiguous to the neoplasm in such manner that the natural responsiveness to the formative stimulus of the causative agent of the neoplasm were lost, then the malignant tumor could be converted into a benign structure.

The Difficult Treatment of Epilepsy

The treatment of epilepsy was purely symptomatic until one of our leading physicians asserted the existence of an epileptococcus that inhabited the colon, from which latter the accumulated toxins periodically were suddenly discharged into the circulation and, acting on the brain, produced the epileptic seizures. The fact that this coccus must also be present in the colon of healthy individuals and its toxins be absorbed without producing epileptic symptoms would seem to suggest that epilepsy is a disease of the brain, and not of the colon; also, that the results from removal of part of the colon and of colonic extirpation are very often similar to those which might be expected from removal of the brain. Removal of a portion of the colon does not eliminate the area of incubation. The epileptococcus simply goes to another portion. Those who regard epilepsy as a disease of the colon had better be consistent and urge the removal of the entire alimentary tract.

Epilepsy is a disease of the brain, and not of the colon. Therapy had better be confined to sedatives, which are safer than major operations and, so far as the writer's observation goes, more effective. Bacterin-therapy or active immunization, upon first thought, would appear to be specific therapy. The principle of immunization of a body with the same organisms that already infect the body at first seems to be sound and should work out practically.

Theory Not Sufficient to Justify Treatment

As a matter of fact, the body can never rise above the standard of the physicochemical equilibrium peculiar to itself. It can not produce chemical groups necessary to antagonize all the various forms of chemical compounds acting upon the cell. Theoretically, gonococci killed and injected should put the cells in a position to involve the living gonococcus in a destructive affinity. Actually, they do not. Theoretically, gonococcal bacterin should act upon uninvolved areas and immunize their cells. Actually, the area of reaction is the area of disequilibrium, and the new protein excites a new inflammation in the diseased area; which sometimes is beneficial, but oftener not. The writer has made extensive trials of various bacterins and never could get the results the promoters report.

Organotherapy is another procedure that appears to be specific. Theoretically, the body, by reason of a diseased or absent organ or gland, is deficient as regards the internal secretion of this organ or ductless gland. The therapy is simplicity itself. Simply introduce into the body the substance of the gland, modified for pharmaceutical purposes, and, presto, the secretion is supplied. However, there appears to be a missing link which further investigation must supply. With one or two exceptions, organotherapy is not specific.

It would appear that the mere fact that a compound is deficient does not prove that its addition will restore normal conditions. The complicated intrasomatic reactions necessitate further study, in order to supply the missing group in such a way that the needs of the body will be met in the manner desired. Simple introduction of a compound does not always bring results. Therapy, then, may be improved by demarcating the symptoms of offense from the symptoms of defense and by study of intrasomatic reactions, with a view to produce therapeutic groups that will meet requirements without a multiplicity of transformations and redispositions—which latter only defeat the purpose for which they are designed.

Nonoperative Gynecology

By William Rittenhouse, M. D., Chicago, Illinois
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EDITORIAL NOTE.—This is the sixth in a series of helpful articles on nonoperative gynecology which Professor Rittenhouse is contributing to CLINICAL MEDICINE. His advice and counsel is certain to aid many of our readers in the treatment of diseases of women.

[*Continued from December issue, p. 994.*]

Retroversion of Womb

WHILE in many cases of prolapsus uteri more or less retroversion of that organ obtains, this term is usually restricted to that condition in which the fundus is turned over backward against the rectum and rests somewhere in the sacrococcygeal hollow. When once the fundus has descended below the promontory of the sacrum, the condition has a strong tendency to perpetuate itself, because considerable force may be required to dislodge the fundus from the bony hollow in which it has been caught.

Retroversion is not of as frequent occurrence as prolapsus, but is encountered often enough to cause the gynecologists more or less perplexity, inasmuch as the results of treatment are not always very satisfactory.

The causes of this condition are similar to those of prolapsus—in a general way, anything that tends to force the uterus downward. Some form of violence, however, is more often the cause than it is for prolapsus. Slowly acting causes, such as prolonged standing or stair climbing, frequently produce prolapsus, but seldom retroversion; they not being so likely to force the fundus into the hollow of the sacrum as would a fall or the shock of a carriage or of a railroad accident. A very common form of accident producing this displacement is to sit down suddenly upon a slippery sidewalk, for example.

I have seen the statement made that lying continually upon the back after confinement is liable to produce uterine retroversion, but I am inclined to be skeptical in regard to this. In all my experience, I have never seen a case where this cause was clearly responsible for a case of retroversion. I always encourage my obstetrical patients to change their position as comfort demands—to lie upon either side or upon the back and to change frequently. Many of them spend most of the time upon the back by preference, yet, I do not find retroversion to occur as a result.

Symptoms of Retroversion

The symptoms of retroversion are similar to those of prolapse of the womb, with the addition of rectal symptoms resulting from pressure of the fundus against the rectum. These symptoms may consist of constipation, when the pressure is great enough to constitute a mechanical obstruction, while sometimes tenesmus exists even when the rectum is empty.

As a rule, a retroverted uterus will not become pregnant as readily as a normal one, but it is, by no means, always productive of sterility. When pregnancy does occur, the tendency to abortion is greater than normally. Especially is this true when the uterus is bound down by adhesions below the promontory of the sacrum. When no adhesions exist, the uterus usually will rise out of the pelvis as its size increases. When it does not readily do so, the patient is likely to suffer from intrapelvic pressure—both the bladder and the rectum being affected.

When adhesions exist, this pressure may become serious if not relieved by abortion. I saw one case in which abortion did not take place, neither were the adhesions broken up, but the pregnancy went on to full term. It seemed as if the anterior wall of the uterus had expanded upward into the abdominal cavity sufficiently to make room for the growing fetus. At the time of delivery, the adhesions were so firm that the os was firmly held far up and did not dilate until artificial aid was given.

Diagnosis and Treatment of Retroversion

The diagnosis of retroversion is not, as a rule, difficult, because the position of the fundus can be felt, with the examining finger, behind the cervix, except in those few instances of unusual anatomical conformation in which the womb lies so high that only a very long finger can reach up to it. It is not uncommon, though, for the gynecologist or the obstetrician to find that his index-finger grows longer, of course, only seemingly so, with increasing experience.

In making vaginal or rectal examinations, it is well to remember that one can reach considerably higher by placing the woman on her side; when it is possible to push the perineum back toward the coccyx, thus deriving considerable advantage. When she

lies on her back, the bed or examining-table is in the way of the examiner's hand when trying to press the perineum backward.

The differentiation between retroversion and retroflexion should not be overlooked, because the treatment of the latter condition is more difficult and complicated than that of the former.

When undertaking the treatment of a simple uncomplicated case of retroversion, when adhesions are absent, the uterus should be replaced with the finger and then maintained in position by means of a perfectly fitting Hodge pessary. Indeed, if the malposition has existed for only a short time (a day or two) it sometimes is sufficient merely to reduce the displacement and then insert a tampon of wool covered with boric acid and to leave this in position for three or four days, when the organ may be able to take care of itself.

The wearing of a pessary is, at the best, more or less of an evil and often I have found it worth while to give the patient the benefit of the doubt by trying the antiseptic wool tampon for a time before resorting to the pessary. By using plenty of dry powdered boric acid (a heaping teaspoonful at least), the wool tampon can be left in the vagina for three or four days without becoming foul. I have frequently been agreeably surprised, after using the tampon for two or three weeks as a preparatory measure, to find that the need for a pessary had been removed. However, with a long-standing displacement of a freely movable uterus, the use of a pessary can but seldom be avoided. In fact, there are instances in which the extreme movability of the uterus seems to be the chief obstacle to a cure. No matter how long we support such a uterus, as soon as the support is removed, it will slip back to the false position.

I recall one woman who has worn a pessary for over six years, except for periodical short intervals, to rest the tissues, and who feels well when wearing the support, but whose womb drops back, and the old symptoms return, when it is removed. This fact is sometimes urged as an objection to this method of treatment, but, in my opinion, not justly. For one such case, I see a dozen that respond satisfactorily to the use of pessaries. No doubt some of these patients would do wisely to submit to operation, but that, as Kipling would say, is another story.

In this series of articles, I am discussing nonoperative measures, not because I am opposed to operative measures, for I am not, but, because the field for nonoperative work is large enough to receive more attention than it hitherto has received.

When There are Adhesions

When a retroverted uterus is bound down by adhesions, treatment is likely to be unsatisfactory, as the adhesions usually are of the peritoneal kind. The cul-de-sac of Douglas dips down behind the uterus so far that its posterior surface and the upper fifth of the posterior vaginal wall are covered with peritoneum. Hence, when a retroverted uterus is found to be fixed, we may be sure that the adhesions are peritoneal, and dealing with these is a different thing than to dispose of a uterine fixation owing to cellular tissue that has undergone inflammation. The forcible breaking up of peritoneal adhesion may light up a fresh peritonitis, and it should not be undertaken without due consideration of the responsibility involved.

Reducing Retroversions

In attempting the reduction of a retroversion, it is always best to put the patient either in the Sims or the knee-chest position. When the uterus is fixed in the false position, a moderate degree of pressure may be applied with the finger to the fundus. but, if unsuccessful in this, great force had better be avoided. Here, as in fixed prolapsus, the elastic lamb's wool tampon may be used for obtaining gradual and continuous pressure, with a view to securing absorption of the adhesions. To insure pressure sufficient to be of any use, one must pack the vagina as tightly as can be comfortably borne by the patient, and to repeat the packings for some time. In my own experience, this method has not succeeded as often as it has in fixed prolapsus.

Sometimes reposition of the organ may be accomplished successfully through the rectum. From here, the finger can reach a little higher up than through the vagina, and, consequently, more direct pressure can thus be applied. Several writers have recommended the introduction of a rubber bag into the rectum, this then being inflated, thus bringing pressure to bear upon the back of the uterus.

Instrumental Replacement

A method of reposition much discussed in textbooks is that of the introduction of a curved sound into the uterus up to the fundus and then revolving the sound through a half-circle by a sweeping movement of the handle. This will afford a powerful leverage, but has

its corresponding dangers. If the sound be too thin or too sharp, the application of force may puncture the uterine wall or, also, inflammation may follow the forcible tearing of adhesions.

The safest instrument for this particular method of reduction that I have seen is the one devised by the late Marion Sims. The portion of the sound that enters the uterus can be adjusted at any desired angle with the shaft, being attached to a little revolving ball that prevents the point from going too far into the uterine cavity and so obviates the danger of puncturing a soft fundus. I have possessed one of these instruments for many years, but have seldom employed it, for, where it is safe it is not needed, and where it is needed it is not safe. In other words, I mean that when no adhesions exist instrumental replacement is not ordinarily necessary—the finger suffices. If adhesions do exist, the forcible prying of a uterus into place is not free from danger.

Always in these cases the value of atmospheric pressure as an aid for effecting reposition should be borne in mind. In the Sims position and in a much greater degree in the knee-chest position, the upward gravitation of the abdominal viscera tends to produce a vacuum in the vagina. So marked is this tendency that the introduction of a tube into the vulva and sometimes even the mere separation of the labia will permit the air to rush into the vagina with considerable force. Inspection thereupon will show the vaginal walls to be distended like a balloon, with the uterus located as far up as its surroundings permit. These conditions are as favorable as possible for replacing the uterus, either by digital, instrumental or rectal manipulation. It likewise now is easy to determine the amount of tamponing required, if that procedure has been decided upon.

This atmospheric inflation of the vagina is also employed as a home adjunct to office treatment. The patient who is undergoing treatment for prolapsus, retroversion, or similar disorder, may be instructed to assume the knee-chest position for ten minutes every night when going to bed. The benefit gained thereby is all the greater, because she does not stand upon her feet for some hours afterward; even patients wearing a pessary often are benefited by this procedure, for, the pressure is taken off the instrument, the parts are rested, and slight displacements of the pessary are automatically corrected. However, one must not neglect to instruct these patients to admit air to the vagina either by separating the labia or by introducing a small tube, say, the nozzle of a fountain-syringe; otherwise, little benefit will be obtained.

Retroflexion of the Womb

To a considerable extent, retroflexion of the womb results from the same general causes that produce retroversion. In some cases, those causes which at first give rise to retroversion will, if these wrong conditions exist long enough, gradually bend the uterus backward. When the fundus is caught under the promontory of the sacrum there is a tendency to bend the organ backward. Many cases date back to girlhood when some accident produced retroversion which gradually has become flexion.

The symptomatology in this lesion is virtually the same as in retroversion.

The diagnosis is readily made by means of digital palpation.

The treatment is similar to that for retroversion, with the additional problem of straightening the bent uterus. In most cases, the latter object is not difficult to accomplish, the trouble being to make the straightening permanent.

How to Straighten a Retroflexed Womb

The method which I have found most satisfactory is, to pull the uterine cervix down with a tenaculum-forceps, using a bivalve speculum; or, if one has proper assistance, a Sims speculum may be used, after which a moderately curved sound is introduced up to the fundus. This may require a vast amount of patient effort before one succeeds, but, the longer the cervix is pulled upon with the vulsellum. the straighter the uterus becomes, and even the stubborn ones finally yield. When the sound has reached the fundus, the handle should be carefully turned through a half-circle with a widely sweeping motion, but with as little force as possible. If this maneuver has been properly carried out, the retroflexion now has been converted into an anteflexion on the curved sound; but, the retroversion may still exist, especially if there are adhesions.

To correct the retroversion, it is necessary to use leverage by depressing the handle of the sound. Of course, if adhesions exist, harm may be done. If moderate force is not successful, it is better to desist. If it is thought advisable to break up adhesion, it should be done under anesthesia and be regarded as an operation of some gravity, keeping the patient in bed for some days

after, until all danger of peritonitis has passed.

In straightening a bent uterus, I do not employ the ordinary uterine sound; for, it is too thin, and I am afraid of its going through a possibly softened fundus when force is applied. As for myself, I prefer the uterine dilators shaped somewhat like male urethral sounds, but with less curvature. I begin with one of small-size, then follow with successively larger sizes until the os internum is dilated so that it will admit a sound as large as a wheat-straw or larger before I apply the force necessary to anteflex the uterus or antevert it.

Some writers advise the use of a stem-pessary for correcting retroflexion as well as anteflexion, but it has not proven satisfactory in my hands.

There is a little wire instrument—Outerbridge's cervical dilator—shaped somewhat like capital letter T, which is intended for insertion into the cervical canal, is self-retaining, and holds the canal straight; it is also used in dysmenorrhea due to any form of stenosis. This little instrument has given me good results in a number of instances both of retroflexion and of anteflexion.

A considerable proportion of cases of retroflexion may be cured without the patient wearing any instrument, by frequently straightening the uterus with a sound in the manner described above. It is important that at each treatment the uterus is held anteflexed for ten minutes or so before withdrawing the sound. If this is done twice a week for several weeks, the results may be satisfactory to the extent of relieving the backache and dysmenorrhea which brought the patient to consult her physician.

Pregnancy frequently cures retroflexion and retroversion—the former more frequently than the latter. In either case, the patient should be kept under observation while involution is going on.

I have been asked for an opinion on the treatment of retroversion by keeping the patient in bed in the prone position. (By the way, that word "prone" has been so frequently misused of late in the newspapers and even by medical writers that "prone on the back" has become a joke, so that it may not be out of place to remark that its meaning is, "lying flat, with face downward," "prostrate.") This position is scarcely practicable in ordinary cases; it has a certain value after an operation for breaking up adhesions.

Anteversion and Anteflexion

These malpositions are much more rare than the posterior displacements, and this is fortunate, because their treatment mostly is unsatisfactory. These conditions are more liable to interfere with the bladder than with the rectum, although in extreme cases the cervix may press the rectum against the sacrum hard enough to cause objectionable symptoms. I recall one case in which the fundus was pinching the bladder against the pubes, while the cervix was obstructing the action of the rectum; as a consequence, there was frequent urination and obstinate constipation.

To straighten the bent uterus, the same methods may be used as described above for retroflexion, but, for treating anteversion, I know of no satisfactory means except the anteversion-pessary, and this has frequently proven disappointing. A great variety of anteversion-pessaries have been devised, each one having its advocates. The one that has given me the best results is known as Gehring's. I cannot describe it better than by saying that it looks like a Hodge pessary bent so that its ends approach each other. It forms a sort of cradle in which the anterior wall of the uterus rests. It is simple and easily kept clean. Many of these pessaries are complicated in form, hard to keep clean, and liable to cause erosion of the tissues.

[*To be continued.*]

The Care of the Incurably Diseased

By J. M. French, M. D., Milford, Massachusetts

EDITORIAL NOTE.—Doctor French's plea that even the incurably diseased should receive the aid and encouragement of the physician is justified; older physicians know how much. It is the younger men to whom the author's advice may be particularly pertinent and acceptable.

I PRESUME that every physician who looks back over a long period of practice must feel that much of the best work of his life has been done in the care of patients whom he did not succeed in restoring to health. Some of these were acute cases, in which only a few hours of life were left to the victims, cases of the kind concerning which one unfortunately, only too often is told that "the doctor said

he would not come any more, as there was nothing that he could do for the patient." But, it does seem to me that such a course is not often justifiable, since in most instances something can be done, at least to give relief, even though it is not possible to save life. Moreover, it is well known that not infrequently patients recover after having been given up by the doctor. Besides, sometimes the grieving friends are more in need of the moral support which the doctor can give than is the patient of the professional help which he may feel convinced he cannot render.

Never Desert Your Dying Patient

I well remember how in the early years of my professional life, I one day was hastily called to the bedside of a brother physician who was in the last stages of Bright's disease. I found him in the throes of a severe convulsion, and it was apparent that he had but a few minutes to live. His young wife was in a state of intense excitement and high nervous tension, feeling the whole responsibility for her husband's life resting on her shoulders and, yet, not knowing what ought to be done, or whether, indeed, anything could be done at all. As I came into the room, I saw an expression of relief come over that woman's face and felt how the weight of a life rolled off her shoulders, the while that burden settled down upon my own. For, was it not the doctor's business to deal with the issues of life and death? As I have said, there was nothing that I could do, and death soon ended the scene. As it was, the value of my services came not from anything I had done or could do for this dying man—my aid consisted in the relief which my coming brought to this fearfully suffering, wrought-up wife.

It was the doctor's business to know whether anything could be done to save the imperiled life and take the responsibility into his own hands. It was a lesson which I have never forgotten. Next to the actual saving of life—and this, you will admit, is a thing which does not come any too often—what more important work does the doctor have to do than to take upon himself the responsibility for a life?

Dr. Alfred Worcester, in his admirable book, "Nurses for Our Neighbors," gives a vivid description of the oldtime family physician and of his faithful work in hopeless cases: "For the time being, this one had taken care of a patient afflicted with an incurable disease, and had continued his visits despite the impossibility of recovery, merely for the sake of giving comfort and courage. The patient feels it. His visits cheer and comfort her. He leaves no drugs, he writes no prescriptions. Quite useless are his visits from the scientific standpoint; useless, indeed, in his own estimation, and, yet, he goes there day after day, without ever so much as entering his visits in the ledger. Profitless practice this, according to modern estimation, but it is what he was taught to do. *Never yet has he deserted a dying patient on the miserable excuse that he could do nothing more.*"

Then there are those many cases which, although the patient can not be cured, are not necessarily fatal until after the lapse of years, this time of grace depending upon the care which the patient receives from the doctor, the nurse, his friends, and himself. We recognize, today, a large class of degenerative diseases on which, if their nature is recognized early, the progress may be checked, either partly or completely, and thus, many years of useful life ensue, although complete recovery is absolutely impossible. It is this class of sick people which must have been in the mind of the old divine, when he gave his celebrated recipe to a young man who asked him how to prolong life—"*Have an incurable disease and take care of it.*"

It is a matter of common experience that the hale and hearty, vigorous and robust person, who never is ill and, so, never learns his limitations, but thinks he can eat anything, do anything, and endure anything, without the need of taking any special care of himself, is the one who fails and goes to pieces all at once, without a warning; just as bubbles do when they burst; or else the strain upon his nervous system and organs of nutrition is so great that at middle life his vitality is worn out and some one of the dreaded diseases of degeneration afflict him, and, because he never has learned to take care of himself and does not realize his danger until it is too late, he soon is beyond help.

On the other hand, the frail and comparatively feeble person, who, from necessity, in his childhood or early manhood learns that he cannot endure as much as his fellow, who is often ill, and thus discovers the necessity of caution in order to prevent attacks of sickness and comes to realize that care costs less and pays better than sickness, by virtue of the self-control he has learned to exercise, soon comes into a better physical condition and, as age advances, gains more vigorous health and develops into a robust and enduring man and reaches old age more often

than do some of his more vigorous but less hygienic fellows.

Instances of another kind may be mentioned in this connection. Owing to the strenuous life of the present age, men as well as women, even though of fairly good physique and personal habits, are liable to contract conditions that, if allowed to continue, soon merge into hopeless invalidism, if not ending in early death. In these cases, the necessary physical discipline, together with proper medical treatment may prevent further progress of the malady, and, although such measures can not set the vital index back to the original figure or restore the vital organs to their normal condition, they, still, may bring about such a degree of improvement as to enable the victim to do good work for many more years. Thus, the diabetic, by keeping strict guard over himself, may continue to be a useful and productive member of society until long past middle life. The consumptive, realizing his own condition and setting himself to build up favorable conditions for himself and others, may die, as in the case of Trudeau, mourned by the world, especially the world of tuberculous persons to whom he had opened the way to health and usefulness. Yet, consumption cannot be cured, in the sense of restoring the tuberculous tissue to its normal state. A cancer, if taken early, may be removed; remembering, of course, the danger of a possible recurrence. A wound may heal, but the scar remains.

Then there is the class of cases in which the disease necessarily is progressive, and the progress continues irrespective either of care or treatment; nevertheless, the patient needs the doctor's attention more and more as the days—and often the years—go wearily by; needs it, to make him more comfortable; needs it, to give him the needed mental and moral support; needs it, often, for the sake of his friends quite as much as for his own, lest they go to pieces without having the doctor to lean upon. In these cases, the physician has a duty quite as real and as important as in those where he hopes to guide the patient to recovery. Here it is that he never should forsake his dying patient, on the miserable plea that he can do no more. It is his business to go down into the valley of the shadow with the sick sufferer and give him all possible mental, moral, and physical support as long as life may last.

The Good Deed Produces Good Results

There is also a reflex influence from these cases upon the physician himself. He learns the natural history of disease—and of death. He learns how to help the helpless, relieve the suffering, cheer up the discouraged. He is a better physician in every way for having watched these cases to the very end. It has given him experience that will stand him in good stead in years to come. It has made him dependable; and people like to feel that their doctor is a man they can depend on.

I remember the case of a maiden lady past middle life, who was almost alone in the world, save for the friends she made as she passed along, who was my patient for the last ten years of her life, during which time she was suffering from serious cardiac trouble, with its many complications. It was one of those cases that tax the ingenuity of the physician to the utmost and at best offer no hope for recovery. But there were many compensating circumstances. There was always something to be done to relieve her. It was here that I first learned to realize the power of digitalin as a support for a weak heart and the superiority of the glucoside over the galenic preparations of digitalis; learned, too, the need of larger than the printed doses—learned this by following out the plan of "dose for effect." By the help of this drug, more than any other (though many others of the active principles were used), I was able to lessen the woman's suffering , and to add to her comfort up to the end of her life.

Instance, Epilepsy

At another time, I had the care of an epileptic patient for fourteen years, which was only the ending of the sixty years during which the woman suffered from this dread malady. During this period of fourteen years, she was constantly under my care and control as a physician. She was a good patient and followed my instructions implicitly to the best of her ability—which can be said of very few epileptic patients. It was given to me to watch her condition constantly, direct her diet and general hygiene as well as her medical treatment. I had, in connection with this one case, much chance to learn the ways of epilepsy, its causes and its natural history, its ups and downs, improvements and relapses, its hygienic management (quite as important as its drug treatment), the extreme rarity of permanent cures, and, the inevitable ending.

In the drug-treatment, I learned the utter unreliability of the bromide treatment as a routine measure in epilepsy, and the absolute injuriousness of bromides in any form or quantity in a large proportion of cases.

Especially I learned the great value of verbena hastata in the class of cases of which hers was a type; and I continued its use through almost the whole of the fourteen years during which she was under my care; using the preparation of the Abbott Laboratories known as verbenin (now called verbenoid), and running up to as high a dosage as 8 grains a day, not only without any unpleasant symptoms whatever, but with the constant effect to control the symptoms and brighten the mental condition in greater or less degree. I also learned something of the value of and indications for solanum carolinense and its alkaloid, solanine; not wholly from her case, it is true, but by comparing its effect in various cases. For this drug never agreed with her and, though I tried it a number of times, I always had to give it up and go back to verbenin, despite the fact that in some other patients I found it of much the greater value of the two. I may mention that it seemed to me that solanine was of the greatest value in the same class of cases as those which are helped for a time by the bromides; while verbenin was more effective where the bromides were plainly injurious.

On the whole, I question whether the physician does not learn from his incurable cases quite as much that is of value to himself, in the treatment of future patients, as he does from those which end in recovery.

Stammering and the Medical Profession

By Ernest Tompkins, M. E., Los Angeles, California

PROFESSOR John M. Fletcher, begins an article on stammering, published in the April 8, 1916, number of *The Journal of the American Medical Association*, with the following charge: "The sufferers from this affliction have looked to the medical profession for relief since the existence of that profession, and have looked in vain." Among other criticisms, are these: "There is in the medical world of today little more than a confusion of personal opinions and theories" . . . . "In this country, we not only have no public conscience, but we have not even an intelligent professional opinion on the subject." . . . . "We, in America, are merely trifling with it." . . . . "In view of the gravity of the condition and in view of the numbers afflicted, such trifling is not only not creditable, but also is criminal."

The very printing of such criticism is, of itself, an indication of open-mindedness on the subject, and one which, in fairness necessitates the restriction of the criticism to more accurate bounds. Since stammering has existed as long as articulate speech and undoubtedly has been treated for the same length of time, the original treatment and most of it since then can not properly be charged to the medical profession. Also, there is one medical opinion that is intelligent and one treatment that is not vain; and these are the opinion and treatment of Doctor Albert Liebmann, of Berlin. Will the educator and psychologist—Professor Fletcher, for instance—come out as openly in his recognition of that opinion and that treatment as he has in his criticism of the others? If so, he will find the whole problem of which he discourses solved, and in large part solved by a medical man, although much credit is due to a layman, Rudolf Denhardt, for his showing that the stammerer has a mistaken idea of disability, a showing which twenty-six years ago demonstrated Fletcher's contention that the treatment should be psychic.

Doctor Liebmann has made a practical application of that showing—Denhardt did not—and, still more, Doctor Liebmann has expressed an opinion of the nature of stammering, which is a test for the most intelligent adversary; namely: that stammering is interference with speech, an opinion corroborated by many intelligent observers, among them Fletcher himself. Thus, Doctor Liebmann says (page 57 of "Die Psychische Behandlung von Sprachstörungen"): "According to my view, the stammerer makes the mistake of directing his attention too intensively to his speech. Through this basic fault, he becomes sensitive to each slight physical interruption, becomes anxious regarding special sounds, and begins, therefore, to interrupt the progress of his speech by all kinds of unfortunate voluntary speech and breathing efforts."

Bluemel unconsciously corroborates this in the following words: "The stammerer sees in the consonant the apparent cause of his difficulty and resorts to physical effort to overcome it. He presses the lips together, tightens the muscles of the throat, clenches the fists, and may work even his arms and

legs, in an effort to *articulate*. But, since articulation itself causes no difficulty, his efforts are entirely misdirected."

Fletcher corroborates both these observers in the following words: "The writer has observed acts of . . . . opening the mouth . . . . pressing the tongue against the roof of the mouth, pressing the lips against the teeth, and pressing the lips together."

To state the matter briefly, the stammerer, through fear of speech disability, makes a panicky effort to avoid the disability, but by this very effort causes it. Consequently, the principle of treatment should be to restrain the misdirected effort and to cultivate spontaneous speech.

Except for the successful application of the knowledge, then, the problem is solved. There is no need of the extensive psychologic investigation for which Professor Fletcher calls; although, for verification, tests of the remedy should be made. Doctor Liebmann gives the details of procedure in his pamphlet already mentioned. It is true that the medical profession could credit itself, honor Doctor Liebmann, and benefit the stammerers by abandonment of ineffective remedies, and adoption of effective ones on Doctor Liebmann's principle; but, for all that, will the educator and psychologist do as well as the medical profession has done? Let us see.

Important as the individual remedy is, it is insignificant compared with the race remedy. The confirmed stammerer may lack the time, money, and application necessary for correction; so, the disorder can not be stamped out by individual remedies. Nor can all of the inducing causes be obviated, for, frights, illnesses, and injuries are not entirely avoidable. There must be some feasible means of eradicating the disorder at or near its inception. That means is in existence. It is in the hands of the educator, but the educator is using it for the injury instead of the benefit of the stammerer.

Repeatedly, and in strong language, investigators have pointed out the injury done to the stammerers by requiring oral recitations of stammering children. Thereby the disorder is spread to the nonstammering children—Fletcher himself assigns imitation as the cause of most cases. The little stammerer is confirmed in his impediment, his schooling is made hateful instead of pleasant, he is graded low in his work, and at last is driven from the schools before his education is finished. It is true that speech-specialists, both medical and lay, although pointing out the injury done by this practice, have winked at it, because of the opportunity it gives them for situations in the schools. However, the real responsibility for this cruelty and injustice to at least 140,000 school-children (Wallin's figures) in this country, rests upon the educator, who most obdurately persists in the censurable practice.

The doctor has listened to his arraignment for failure to use effective individual remedies —an arraignment not entirely deserved, as we have seen. Will Professor Fletcher call to the attention of the educators their much greater remissness in spreading, intensifying, and perpetuating the disorder? They have no excuse for their present treatment of the stammerers. Little stammerers may be taught by means of concerted work (stammering is absent in concerted speaking and concerted reading aloud), and then, after they have learned to write, their recitations may be written. By an order consisting of only five words—"Prohibit stammering on school-property"—the schools may be turned, from a place of unjust punishment and injury to the stammerer, to one of pleasure and benefit. Professor Fletcher's chicken has come home to roost. Will he take care of it?

The Human Won't

By C. S. Cope, M. D., Detroit, Michigan

EDITORIAL NOTE.—What is sin? The old, old question once more; and this time it is asked, discussed and answered by a physician who has seen "sin" and suffering and illness, mental and bodily, with intelligent eyes; who has acquired a large sympathy, a deep understanding and, therefore, a sound method of dealing with "sin," which is not only mental disease but also a consequence of physical ierrgularities, of "short-circuiting" in the human battery, as the author calls it. Study this paper well, doctor, it will open up a new understanding of that case of "Jones" that has bothered you so much.

THE inharmonious interaction of the cerebrospinal and the sympathetic nervous systems results in abnormalities of idea tion and action that in popular parlance are classed either as sin or as insanity. A normally working body, under the harmonious control of both nervous systems, does not exhibit either sin or insanity.

Intellectually, mankind is divided into five classes, namely: (1) the imbecile, in whom

intellect does not exceed that of a normal child of three years of age; (2) the feeble-minded, whose mentality does not exceed that of a normal child of seven years; (3) the moron, whose intelligence is less than that of a normal person of twenty years, most often being that of an eight- or ten-year-old child; (4) the subnormal, an ill-defined group, reaching mentally from the moron below to the normal above. (It is not always easy to recognize individuals of this type, the line of demarcation being as elusive as that between sanity and incipient insanity—the blending of the colors of the rainbow furnishing a more crude, material illustration.)

The morons and the subnormal individuals comprise the two groups with which the corrective efforts of men have been engaged in all ages. The obliquities of these people have engaged the attention of the three great professions of medicine, law, and theology; the medical, to heal physical anomalies, the legal, to regulate their civil action; the theologic, to correct infractions of the moral code.

In all ages, the church has spent all its force to keep these "peculiar" people in proper line, and its final means consisted in a promise of future reward and the threat of eternal punishment. Reformation, penitence, and penance were supposed to work their ends through the action of the human will, and he who persistently disregarded the teachings of the church was considered beyond redemption, and condemned to everlasting torture.

The Human Will and Won't

We have spoken of the human *will* as a determining agent. Have you ever considered that there could be such a thing as a human *won't* (or will-not); a something that is as powerful and as potent to control men's action as is the will positive?

Rome never could have ruled the world, had it not been for the cloaca maxima—that incomparable sewer-system that was and is, and will continue to be one of the grand wonder-works of the world. The human body contains an aggregation of sewers—to block these, inevitably means distress, disease, death for the individual.

The great Galilean philosopher said: "Not that which entereth a man defileth (befouleth) him, but that which cometh out." The syphilis-begetting spirochæta pallida, and the gonorrhea-producing gonococcus come out of the sewer-system of the generative organs of men and women—those microorganisms that are befouling the human blood stream more than do all other sources combined. And these vile contagions are disseminated principally by the subnormal and the morons who people the red-light districts. But they can be controlled.

In order to have a perfect human being, the individual must be "caught" young, and thereafter kept under constant surveillance as long as he or she lives. If left to themselves, the subnormal and morons soon would die out, for their power of resistance is very low. However, their number is constantly being added to from degenerate specimens originating among the normal members of society—and the medical profession is directly responsible for this degeneracy. To ignore or to neglect abnormalities in infantile life, is, to open the way to degeneracy.

Swedenborg said, "The final end of sin is insanity." Statistics show that, aside from the presence of any cranial traumatism, the insane person who is not afflicted with some serious lesion of the rectum or generative organs is a rarity. Is it not, then, obvious that appropriate early precautionary measures, employed in a given individual, would have prevented those particular lesions that are known to give rise to that which the theologians for so long have been calling "sin" and the "power of the devil" and by alienists called "insanity"?

I pause here to say that eugenics can get in its best work by preventing the mating of morons or subnormals until they are twenty-five years of age. Ordinarily these folk mate and reproduce before they are twenty, and their offspring are of low physical and mental force, while the children born of these people more than twenty-five years of age as a rule are more mature and show a tendency to advance, rather than to retrograde.

In a large factory where electricity was the motive power, there one day was much confusion, a loud noise, and great flashes of light, and men moved swiftly from place to place shutting down this and shutting off that. When order was restored I inquired what had happened, and the foreman replied that it was "the result of shortcircuiting." Being asked what a shortcircuit of the battery would do, he said, "The shortcuiting of a battery plays hell with the machinery."

The contacts made in the human body between the cerebrospinal and the sympathetic nervous systems are, in the upper parts of the head, largely the nose, throat, eyes and ears; and in the lower parts they are ths pile-bearing inch of the rectum just inside the sphincter, the prostatic inch in the male urethra; and, in the female, the rectum, the

clitoris, and the cervical uterine canal. So long as normal contacts are made, perfect harmony and health obtain, but, let short-circuits be made—then look out for the "machinery."

When the dear old mother begins to scold and nag and find fault, to make things decidedly unpleasant for the family and everybody else of the household, you may be sure that the source of the trouble is not in her head or heart; for, bless her, dear old soul—she is as dear and as lovable as ever. What is troubling her is, that she is under the control of a shortcircuited battery. The insulation is rubbed off somewhere, and disagreeable exhibition is the resultant sparking.

If the old gentleman grows grouchy and glum or despondent or melancholy, you must not charge it up to perversity or devilishness or sin; you may be sure he has a shortcircuit somewhere, either in the rectum or his prostate gland or his stomach

Dean Swift said, "No man can die with full assurance of faith who has a disease below the diaphragm."

Shortcircuits and their Effects

The human won't telegraphs to the will that, as digestion is now complete, it's up to the human will to open the sewer outlets and relieve the body of its excrement. In reply, the human will, in its regency and dictatorial mood, says: "Keep still, I have a letter for my cerebrospinal servant to deliver, or I have a visit for the body to make, or I must attend a very particular party. The gates, sir, will not open now."

Subservient to the driver, the human won't silently cuts off the connection and ceases to send telegrams. The bowel and bladder fill up. The won't gets in its work of silent rebuke. Consequence: There is a coated tongue, an accumulation of flatus, a pain under the shoulder-blade, faulty metabolism; in short, a sick man. Then at last, in desperation, the human will has to call in the doctor, who very properly calls in the assistance of the sympathetic nervous system, and this willingly assists.

However, the harm done the system is not easily overcome: some of the terminal ends of the contact with the pudic nerve have been abraded and shortcuiting is sure to follow.

The Apostle Paul said: "I find warring within a something that, when I would do good, evil is with me, that the good I would that I do not, and the evil that I would not tnat I do. Oh, wretched man that I am, who shall deliver me from the body of this death?" Paul knew nothing of nervous systems. His reasonings were deduced from the Platonists and the philosophers that preceded him, but he came near to the cerebrospinal, to sympathetic to the human will and human won't, in his idea of good and ill at war within him.

Who but the surgeon and physician can liberate the human victim from the "body of this death" that handicaps him, and thus to permit him to be as God meant him to be—perfect in every function of his body? Then the theologians' occupation as a proclaimer of sin will be gone, for that which gives rise to what he calls sin is but a deflection from the normal, and not an inheritance from some extraneous source.

A prisoner broke all the prison rules. He was a pleasant-looking young man of twenty-five. The chaplain did all he could to reform him, yet the prisoner would do the most unheard-of things—tear up his clothing, break anything he could lay his hands on, break every rule of the prison. Finally the chaplain gave him up as incorrigible, really beyond redemption. The warden tried moral suasion. but without avail, the deputy went as far in punishment as the state laws permitted, alienists were called in and they declared that the man was not insane—it was necessary to put on the straightjacket and keep the recreant in solitary confinement.

Taken sick one day, the convict was conveyed to the hospital, when the physician, in making his examination, found a slight swelling in one side of the man's abdomen, and said to him: "I do not know just what this is, but when you are better I should like to make an exploratory incision, in order to find out." The prisoner consented.

Surgical Conditions vs "Sin"

In due time, an exploratory incision was made and this revealed a partly strangulated hernia. The adhesions were broken up, and after the wound had healed the man once more was sent back to his solitary confinement. But, lo! a change had come over the spirit of this hitherto unruly man: never again did he break one of the rules; he was so amenable to discipline that before his long term of sentence had expired he was trusted and respected by all who had to do with him.

Now I ask: Was that man a sinner? Was he possessed of the devil? Had he died in one of those "bad spells," would he now be suffering in unending hell-fire?

When I spoke of the duality of things that work together—as electricity and magnetism, the human will and the human won't—I wished to point out that heretofore only the most prominent one has received attention.

The human machine has many parts, and only he who knows these parts familiarly has any business trying to run this delicate machine. There are many doctors, but physiologists are few. There are many sky-pilots who never took a lesson in aviation and are absolutely ignorant of the intricate machinery involved in the human flying-machine.

The Case of Jones

Jones does not get on well. He has the best of intentions, but his business schemes fail. He is always a little behind in everything. Yet, he is pleasant, good natured, would not do a wrong thing if you offered to pay him for so doing. You, however, declare Jones a failure. After a while Jones begins to think so, too, and he wonders, Why? He grows melancholy and downhearted and finally concludes that he is a sinner, although, for the life of him, he can not put his finger on a single spot where he has not been perfectly straight in his conduct. By and by, in his distress, Jones goes to the minister. The two have some scripture reading and a short session of prayer, and Jones is comforted and goes on his way. In a week or so, he is back again, and the minister is sympathetic and they go through the same routine. Thus Jones keeps up his weekly visits for a while—but, he is not any better. Eventually the minister gets bored over Jones and really dislikes to have him call, until at last Jones himself feels that his welcome is worn out and, so, he goes there no more. And the minister is thankful that he does not. Poor, misguided minister! The old, old things of theology fit not here. It is you, and not Jones, that are at fault.

Jones then goes to consult a doctor and says to him: "I do not know what is the matter, whether there is anything the matter with me at all." The doctor looks his new caller over, gives him some pills and good advice and tells him to report next week. Patient Jones repeats his visits to the doctor for a long time, but gets no better, until finally, he feels that there is no inviting atmosphere for him in the doctor's office, and when the doctor has closed the door upon his patient for the last time he says to himself, "That fellow is a malingerer; I'm glad he has quit." Poor misguided doctor. The old, old medicaments of your profession are obsolete and so are you. Wake up, old man, else "Rip Van Winkle" will be inscribed on your monument.

Jones goes out to the street, a sadder, but a wiser, man. Meeting a friend, he tells his tale of wo. The friend says, "Come with me," and he takes him to a church where a new faith is being proclaimed. Here, to his wonderment, Jones learns that he really has no lung nor liver, no pain nor distress, neither a stomach nor sin, and that all he has to do is to human-will it all away. "Just think so"—and there you are.

And Jones, carried up to the seventh heaven on this Platonic cloud of Eddyism, sails aloft, apparently oblivious of the earth, to which his feet belong. Poor, deluded people! Like the Spartan youth who stole the fox and concealed it under his tunic, although it bit into his very vitals and sucked his heart's blood, Jones held close his newfound belief, rather than betray emotion or suffering, so great was his stoicism. And Jones, carrying his metaphorical fox, as they all do, under the cloak, went on his way, declaring to all, and surely, that he was "all right." When a few months later Jones departed this life, he died of that same disease of which this "new science" had so proudly declared it had cured him. Jones had a shortcircuited battery, which neither preacher nor practitioner had been skilful enough to detect.

The Sins of Medicine and Theology

Now listen to me! I accuse the medical and the theological professions of illicit intercourse, and, as a result of this unholy alliance, of being the progenitors of a hybrid offspring that, having no pride of ancestry, no hope of posterity, stands squarely in the path of progress and blocking the way. From the medical profession, descending with the centuries, have come the world's great errors.

When the Greeks found empty tubes in the lifeless body, they said, "These tubes contain air, we will call them arteries"—and as arteries they are known to this day. Furthermore, they declared that in these air-tubes there reside the spirits of good and evil that affect mankind. Here was born Plato's daimon, the devil of later times. Theology, accepting this dictum, took upon itself to exorcize these evil spirits, or demons. Thus the church came into existence. In all centuries since then, the work of the church has been to cast out demons. The ancient Hebrew scriptures knew but little of this. It is only after the Jews' return from their

Babylonian captivity that this idea appears among them. Eden and Satan were largely a creation of the Apostle Paul.

We have shown that that which is called sin really is a shortcircuit of the human nervous system and that this results in abnormal actions of the individual so affected—that socalled sin is not an entity at all. The Apostle calls it all sin, that he may cure all. A four-year medical course would be advisable for those who seek to prevent this "sinful" condition.

Brethren, the world is waking up. We now see that men have jumped to conclusions, but have been too proud to acknowledge a mistake. They invariably begin at the wrong end of things. The university was established long before men dreamed of the potentiality of the kindergarten or the common school. They have hammered the heads of humanity with the maul of the human will to no lasting good. They have prescribed for them the proper dose, but ignored entirely who was to take this dose. Come now, let us reason together. If, in following in the footsteps of the Creator, we discover His plans more clearly, let us still follow Him, for, in so doing, we are benefiting the human race. The only thing that abides is love, and love in its last analysis is the kindly consideration of one human being for another.

The following recent experience will serve to make clear what I am trying to emphasize.

The Ill Effects of Hidden Physical Wrongs

One evening, while I was making a social visit, my hosts spoke of their children, one a boy one year old and the other a boy of three and a half. It was the older about whom they were worried, saying that he was unusually irritable, petulant, and irascible, very difficult to control, and shouting and smashing things as they came in his way. I said: "There is a physical wrong somewhere; it is not a moral fault. The boy is acting from nervous reflex." The parents laughed at this, saying: "Why, that boy is the picture of health and is a regular athlete for one so young; he has never had an ache or a pain or a blemish since he was born." Telling them that I wished to see the child naked, I was shown to his bed, and as he lay there, fast asleep, he surely was a perfect specimen of boyhood, a veritable Apollo or Cupid.

The boy was lying on his face, so I could manipulate his legs and spine. Turning him on his back, I went quickly over the front, till I came down to the genitals, and there, at the end of the penis, the skin was plum-colored, surrounded by a circle of white. Addressing the watching parents, I said: "There is the trouble."

The prepuce was adherent to the entire dorsum of the glans. The father firmly holding the struggling boy and the mother furnishing illumination with a flashlight, I rapidly, with my fingers, broke the adhesion. As I passed the corona, a rope of smegma, the accumulation since birth, came away. I then applied some vaseline and instructed the mother to continue these applications once or twice a day until the parts were healed.

I now asked to see the baby, but was met by a storm of protest: "But why? The baby is all right, you will find nothing wrong there! Nevertheless, I stepped to the baby's crib and uncovered its body, and there was revealed a prepuce tightly glued to the glans and having only a pinhole opening. "This," said I, "demands immediate surgical treatment, and I would advise you to take both children to the most skilled surgeon and physician available and let him take care of them, not only now, but till after puberty. With your wealth and position in this community, if these boys are allowed to grow up uncared-for, they will degenerate from the high position their ancestors have occupied in the legal and agricultural fields; they will become absolutely bad. The fine sexual natures here developing, if handicapped by these shortcircuited batteries, will become sensual. They will early be disobedient to parents, revolt against the home discipline—then a wild young-man's life, law-breaking, penitentiary. Properly restrained, these boys will become scholars, men of high standing in the community, loved and honored. The thing is in your hands."

During a vacation one time, I stopped at the farm-house of a very prosperous family distinctly of the upper type. I spoke of their oldest son, a lad of twelve years, and the mother said that he was a good boy, but very shy and immoderately modest; had grown up rather spindling and really was not very rugged. Permitted to see him stripped, I immediately found that plum-colored foreskin. I was able, by manipulation, to loosen the adherent prepuce and get things into proper shape, much to the surprise and some pain to the youth. I told him and the mother the cause of this condition, also its bad consequences if not closely attended to. Unattended, he would degenerate and bring

his parents nothing but sorrow. He would get in with a gang of toughs, sow his wild oats, reap his crop of venereal disease, and, worse, become the progenitor of pitiable but dangerous morons. Properly corrected, on the other hand, he would grow up a useful, worthy citizen.

The Doctor Prophylactic

There are two classes of doctors—the prophylactic and the therapeutic. There once lived on earth a man who, when a baby, was given the name of Jesus, for, they said he should save the people from their sins—not after, but before. He was the true Doctor Prophylactic. Doctor, would not you like to be a doctor prophylactic?

I cite these cases that you may look upon them as beacon-lights. Honestly, now, doctor, how many criminals, male and female, have you thus carelessly let loose, just because you "did not think?" In the seventeenth, eighteenth, and nineteenth centuries, our theology was sour and sad. Thus, one lovable old minister said: "I know that the number of the elect is so accurate that it may not be increased or diminished. I love my children dearly. It may be that one may be of the Lord's chosen. If only I knew that one, I should entreat the rest so much more kindly." Dear old man—his philosophy was faulty and he unnecessarily worried over something that never existed. His mind was dwarfed by an erring theology.

The twentieth century shows us that there is but one "ology," and that "ology" is physiology; and we have learned that life is its prophet. "Man, know thyself" is the watchword of progress. I wish that in every medical school and wherever obstetrical teaching is given the student were taught that in his hands lies the making of the nations. Doctor, you are the man to say: "Suffer the little children to come unto me and I will remedy their physical defects and make them fit for the Kingdom of Heaven."

What the General Practitioner Can Do in the Treatment of Chronic Diseases

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[*Continued from January issue, page 45.*]

Constipation

CONSTIPATION like most other evils present in modern life, has been charged to our civilization. Sir Robert Sawyer emphasized this notion very emphatically some years ago. Several years previously, a St. Louis physician expressed the opinion that "constipation so common among civilized people, and especially females, is in some measure due to the restraint of clothing and modesty; if children and men were no more restrained by clothing and sense of what is decent and proper than are the beasts of the field, constipation in the human family would be as rare, no matter what their ordinary diet is, as it is among the beasts of the field."

This opinion, however, like most opinions as to the good hygiene and sanitation of primitive man, is utterly erroneous. The Indian, A. B. Holder says, will leave his tepee just as the dog will go out of the house or its kennel; but the savage—man or woman—will stop within ten feet thereof, in the sight of the entire village, when and where the inclination prompts, will spread the all-useful blanket above the head and obey with commendable promptness the calls of nature; still Indians are subject to constipation.

However, the conditions of the eighteenth century domestic hygiene, as described by Doctor Smollett in "Humphrey Clinker," would explain the development of constipation in people, especially in the working class, including the women; in fact, similar conditions prevail today in Spain and other continental European countries. Winifred, Smollett's hysteric servant-girl, well describes these conditions in Edinburgh in the eighteenth century.

Constipation may be defined as an interference with the proper evacuation of waste products contained in the intestine. It implies, however, something more than mere ejection of waste. Unless there is elimination of the products normally evacuated through the intestine, mere relief of imperfect evacuation does not remove the symptom-complex that really constitutes constipation. There also is involved here, as elsewhere in the physiology, a psychic element. The cloacal

condition normal in the lowest mammals, in which one canal fulfils the combined function of defecation, micturition, and conjugation, remains quite late in the embryo and sometimes even persists at birth. Such imperfect evolution of the rectum from the cloacal condition sometimes constitutes a factor in the constipation of adults. That there is some defect resultant on this, is shown by the relief felt for a time in youth, when the rectum is emptied. In early life, as Havelock Ellis points out, the emotions caused by forced repression of the feces frequently are massive and acute in the highest degree, and the joy of relief is correspondingly great. But in adult life, on most occasions, these desires can be largely pushed into the background of consciousness, partly by training, partly by the fact that involuntary muscular activity is less imperative in adults, so that the ideal element in connection with ordinary defecation is almost a negligible quantity. Many times brief attacks of melancholia and of apathy may be removed by means of a saline purgative. The mental relief is so marked as to seem like actual stimulation.

Diarrhea Caused by Constipation

Constipation may be expressed in diarrhea, contradictory as the term seems. There is a postconstipational diarrhea of the lower bowel which is relieved by castor-oil and rhubarb, agents which tend to expel the irritating contents of the upper bowel and constipate the lower. Much of the repute enjoyed by castor-oil is owing to its usefulness in this class of cases. That it acts as an eliminant, purgative, and anodyne, is shown by its remedial action in neuralgia. Here, the anesthetic action of the contained ricin doubtless also plays a part.

That suggestion has an influence in checking or inhibiting the peristaltic action of the intestines, so necessary for their proper function is shown in cases like the following of D. Hack Tude's, a class encountered quite frequently:

A seaman had suffered from four successive attacks of constipation. So far as could be detected, there was present no organic disease to account for its occurrence. The symptoms were such as usually follow protracted constipation, and on all four occasions large and repeated doses of the strongest purgatives (croton-oil included), powerful enemata, cold affusion, and hot baths all had to be persevered in in order to procure relief. On the fifth attack, the patient was given 2-grain bread pills to be taken every seven minutes much solicitude being expressed, of course, as to his not taking an overdose, as well as to his closely watching the effects produced. Within two hours, the man became sick (one of the symptoms that he was made to expect from the medicine) and his bowels moved freely almost immediatly after; nor did they again become constipated.

These cases under the influence of suggestion-principles have become rather numerous in the practice of what is called, mental therapy. Very probably a by no means small percentage of the "cures" credited to miracles and Christian Science belong in this category. Persons of robust health and undisturbed performance of physiologic function have, as Bristow states, an alvine evacuation at least once daily. Yet, many who are, or at any rate seem, equally healthy, have bowel movements every two or three days only, or even but once a week or two. Instances are not altogether rare in which the intervals between successive evacuations have been extended to such unusual periods.

Symptoms include not only local uneasiness, such as fulness, heat, tendency to piles, and flatulence, but also some degree of general disturbance, as indicated by headache, foul breath, loss of appetite, and dyspeptic symptoms, and not infrequently end with the occurrence of more or less tenesmus and even slight dysenteric diarrhea.

Habitual constipation is usually attended by chronic discomforts of the same kind, but leads also to more or less permanent hypertrophy and dilatation of the rectum—conditions which render it less efficient for expelling its contents. When constipation is of long duration, not only the rectum, but the whole of the large intestine may become dilated by its contents and eventually hypertrophied; the mucus surface may be fretted into ulceration, so that perforation may ensue. The dilatation is sometimes so great that the colon measures from ten to twelve inches in circumference. The chief dilatation occurs in the rectum, sigmoid flexure, and cecum. The hypertrophy, under such circumstances, is general, but it is usually greatest in the sigmoid flexure and upper part of the rectum, where the thickness of the muscular coat may be one-eighth inch or more.

Causes of Constipation

Constipation depends upon various causes. It sometimes arises, temporarily, from change of diet, scene or habits, among which may be included anything interfering with the regular performance of defecation; it is com-

mon in many diseases; it occurs in a chronic form in chlorotic or dyspeptic girls and young women and in persons of sedentary habits or sluggish constitutions.

As Thompson says, constipation, when it is not dependent upon some gynecological ailment, is generally due to deficient action either of the small intestine or of some part of the large intestine. The former arises from two causes—deficient secretion, and lack of innervation or of muscular action. Although the constipation arising from deficient secretion is quite distinct from that owing to want of muscular action, many times both causes are present simultaneously.

As deficient secretion in the small intestine may be rooted in some upheaval of the liver, the seeds of constipation may have been sown at the time when the patient was afflicted with a severe form of fever involving this organ—such as the bilious remittent; or, possibly, tropical diarrhea, which is nearly always attended by notable hepatic disturbance. Excessive fecal accumulation and impaction do not exist here, but there is, instead, a sluggish action of the bowels and the patient commonly is obliged to take medicine every four or five days in order to force a movement which, when secured, is dry and only moderate in amount. This is the class of constipation that prevails in the northern states following the poisoning from malaria, while in the South it is common as a result of the diarrhea peculiar to that region.

The Treatment of Constipation

In a case such as just explained, a mild cathartic only would aggravate the condition, for the reason that its temporary stimulus would at once be negatived by the tendency to deficient secretion; the result of active purgation would be positively injurious; and not much good could be done with drugs that stimulate nerve action.

What the intestine requires in such a case is, slightly to increase lubrication, and for this purpose by far the best results have been obtained through the copious ingestion of water—two tumblerfuls in the morning before breakfast to begin with. Those who take water freely are seldom afflicted with constipation. To ensure the highest laxative action of the water, some mild laxative saline —or even common table salt—should be dissolved in it to prevent absorption of water from the intestine.

Exercise is an important step in the treatment. If possible, the patients should play golf, walk or row. Exercise the abdominal muscles by making certain movements of the body before arising in the morning, accompanied by manual massage. This is done by pressure and rotary movements of the hands on the abdomen, beginning over the ascending colon, then proceeding toward the transverse and the descending colon. Then the patient, being taught how, is to massage with both hands deeply over the entire abdomen. These manipulations should occupy about five or ten minutes. Upon arising, gymnastic movements should be made for the same length of time.

I have used and with some results, the cannon-ball massage, employing a 2- to 6- or even 7-pound ball moved over the abdomen as indicated. Also, I am a firm believer in vibratory massage, *when properly executed.* It must be given from eight to ten or twelve minutes at each treatment.

The Diet

In chronic constipation, the diet is of first importance. In a general way, we can tell the patient to cut down the meat and eggs and increase the vegetables, fruit, and cereals. In some cases, I even eliminate the meat and eggs entirely for a time. If they are permitted, beef, chicken, mutton or very well roasted pork may be prescribed, but only in moderate quantities. The pork must be cooked for at least two and a half hours, or until it falls to pieces under the knife when it is cut. I instruct my patients to eat freely of such vegetables as spinach, lettuce, celery, cauliflower, peas, bran, raw cabbage, greens of every kind, asparagus, Brussels sprouts, potatoes, in fact, practically all vegetables except cooked cabbage.

Good results are obtained from bran-muffins or bran-bread, letting the patient eat a muffin or one or two slices of bread at each meal. Whole-wheat or Graham bread may be substituted for the bran-breads, if the latter prove objectionable. Fats of every kind are valuable, consequently we may allow plenty of bacon, cooked well, but not crisp, also cream and butter. Milk is an uncertain quantity, constipating to some and relaxing to others. The starchy foods, such as rice, macaroni, and potatoes, are of questionable value, and should be eaten in moderation.

The widespread notion among the laity that certain fruits are laxative is a true one, with proper restrictions and modifications. Oranges are laxative, without doubt, but it requires ten or a dozen of them in this climate to conquer an obstinate case of constipation;

a fact that throws them out of the question in northern regions. This is not true of the warmer countries, where oranges alone may overcome the worst cases of constipation. The more juice they contain, the better their effect, but the citric acid, when taken in excess, induces catarrh of the intestines. Figs, though they are laxative, lean toward danger, for they are likely to obstruct the intestines unless taken with large quantities of water. In fact, about twice as much water should be taken with figs as with any other laxative fruit. All the fruits of the north are uncertain in effect, and, though the action of apples usually is good, few people can eat enough of them to produce an effect on the bowels. They may, however, take them with copious draughts of water. Water is the main agent here, as it is one of the most important in nearly all forms of treatment for deficient secretion in the intestine.

For fruit, I permit all kinds, except bananas, blackberries, and blueberries. To some, the raw fruits are not agreeable; in fact, in most cases, I order the stewed fruits. To those who can assimilate them, raw fruits are of value. The eating of an apple or two at bedtime or of raw figs, peaches, pears, or dates, throughout the day, will be sufficient to keep the bowels in condition. Grape fruit and oranges are efficacious and stewed prunes, apple sauce, stewed berries of all kinds except blackberries, are of value.

Flatulent Constipation

When constipation is accompanied by flatulence arising from decomposition of food, intestinal-antiseptic tablets, composed of the sulphocarbolates of lime, soda, and zinc, may be taken or my prescription for compound creosote tablets (prepared by Abbott); and, if the intestines lack innervation, there may be added a little strychnine.

The indications that deficient innervation, especially in the small intestine, is the principal element in a case of constipation, are as follows:

Deficient innervation usually attends the constipation of persons of sedentary habit, elderly people, and those whose occupation compels them to maintain bodily attitudes in which the abdominal muscles remain largely inactive—as tailors and cobblers. There is a tendency to headache and great lack of the coloring matter of the bile, the secretory as well as the muscular action of the intestines being disturbed. Therefore, the patients of this class generally present a dull, sallow color, a greasy appearance, have sluggish movements and the frequency of pulse is reduced.

The Treatment of Flatulent Constipation

The habits of these patients whose constipation has deficient innervation as the prime factor have tendency to prolong the disease, and they require a method of treatment different from that given to patients whose chief trouble is deficiency of secretion in the intestinal canal. Generally speaking, the former should take less water internally than the latter, as it weakens their digestive power when present in large quantity, and this would bring on loss of appetite, heaviness in the head, and the like, while at the same time it would excite very little peristaltic action of the bowels; such patients could derive benefit from the internal use of water only by changing their occupation and also their habits.

Therefore, if the patient must remain at his occupation, water should be applied externally, together with some tonic, given internally, for the intestinal canal. These patients should take a sitz-bath every night in water as cold as they can bear and still have a good reaction. Often this simple process has the very best effects, not only in these cases, but also in those of deficient innervation of the colon.

Sponging the spine and abdomen, on rising in the morning, with cold salt-water made as irritant as may be, is another highly efficient procedure in this disease, or the abdomen may be given a local shower-bath—dashing water against it while the patient is in a standing position. This induces an action in the bowels through the sympathetic action of the surface-nerves on the underlying viscera.

Strychnine has proved to be very valuable in this condition, and it may be given in combination with other drugs. It will increase the activity of small doses of the resinous cathartics, which are stimulant and irritant. For this reason, light doses of aloin with strychnine and atropine will have greater effectiveness than if given alone.

The Faradic current, one pole of the battery placed on the spine and the other passed up and down over the abdominal walls, is effective in many cases.

The "healthlift" also is good when there is no lesion of the bowel. It brings into action all the abdominal muscles, especially the recti, and this action is directly on the sluggish intestines.

[To be continued]

Do We Have Too Many Operations?

A Newer Corrective Surgery Versus Sacrificing Tendencies in Modern Surgery

By George Betton Massey, M. D., Philadelphia, Pennsylvania

AS in the science of penology there are differing views on the old question of the proper treatment of erring human beings, varying from their destructive segregation from society, without opportunity for reformation (which has been all too common), to the more recent attempts to reclaim them as normal men and women, so in surgery, which may be said to be the treatment of erring, or shall we not even say "criminal," organs of the body, a movement has arisen in the medical profession that aims at similar reclamation instead of removal.

The followers of this movement believe that under the influence of the extremely rare mortality attending modern cutting operations, body-organs capable of restoration to health have been needlessly sacrificed under a wrong impression of their incurability. To use the automobilist's jargon, the transmission or differential has been condemned and removed, when it needed only an overhauling. When an automobilist makes this mistake he is hurt in his pocket only, for a new "organ" can be installed. Not so with the human repair-man. If he has erred, no matter how honestly, the possibility of substituting a new organ is so unlikely as to constitute one of the newest and rarest accomplishments of his art.

Of course, we are not, now, speaking of organs that are absolutely essential to the running of the human machine, but of the many that are essential to the completeness, comfort, and value of life—organs that sick persons will at times readily agree to sacrifice if told honestly, though—we claim—at times incorrectly, that such deprivation is necessary for the restoration of health. Retaining life after the operation, and often regaining such health as is possible minus the organ, these now artificially imperfect persons pass through life thereafter with the consolations of philosophy in the presence of the inevitable.

But, we now know that deeper questions are involved than probably were considered in the formation of the opinion of the operator as to the results of the sacrifice. These organs do not live for their manifest functions alone. We have recently discovered that they may be manufacturing certain internal secretions delivered directly into the blood current and which are essential to our wellbeing. We now know, therefore, that the loss of such an organ is a very serious matter.

How have these misconceptions come about in a branch of the most altruistic profession on the face of the earth? The answer is simple. While a newer surgery is slowly arising, it should be remembered that the conventional surgery of today is itself new and possibly still in its callow period. For modern surgery is but forty-five years old, in the sense that its triumphs, made possible by the discovery, in the forties, of anesthesia, could not reach their fruition until the discovery, by Pasteur, of antisepsis and its application to surgery, by Lister, in 1871. Therefore, the present generation has seen the emergence of modern surgery from the paralyzing effect of the hasty, brutal assault of the operator in the preanesthesia ages, which was nearly always followed by the undoing of even this hurried work through suppuration in the wound.

The new surgery, that included absolute cleanliness and ample time for careful work, had, therefore, an unusual opportunity for serving humanity. It has responded with achievements that have been among the notable events of the nineteenth century. In many departments, the end of this advancement is, by no means, in sight. Its mechanical perfection, unhampered by pain or infection; the thousands of attractive hospitals devoted largely to this work alone; the prestige that finally came to it—so commanding indeed that one was not in the fashion unless one had been operated upon, to speak with but slight exaggeration—resulted in an abundance of "material" for study that permits the revelation of limitations as well as of triumphs.

It is upon these limitations that the newer surgery is based: failures of merely mechanical methods to perfect our bodily vigor, restore our wellbeing or preserve our lives when suffering from certain surgical affections; nay, even results that have left us in worse condition than before operative intervention. The wonderful progress of modern surgery in many directions is fully granted.

What the Newer Surgery Imports

What is this newer corrective surgery, as it may be called for want of a better name?

In the first place, it is based on a recognition of the fact that, like the analogous parts of a motorcar (the resemblance of the functions of the various organic systems contained in the modern automobile compels reverting to it once more as an illustration), a sick or erring human organ is usually capable of repair, and it should be given this opportunity before deciding upon its removal. And this repair is not necessarily the crude cutting or sewing generally passing, in surgical literature, for conservative surgery, but consists in the devitalizing or weakening of infecting agents or removing abnormal deposits within organs, usually accomplished by some form of physical force capable of penetrating the body without harm to healthy flesh. Those most employed are electrically propelled ions that are inimical to low forms of life, Roentgen rays or other forms of radiotherapeutic agencies, violet or ultraviolet rays, and so on. Similar results in overcoming local disease within organs may, at times, be secured indirectly by arousing the repair-forces of the body itself by direct applications to the organs, through the skin, of high-frequency or other forms of electrical energy of a stimulating character, heat rays, and so forth; or still more indirectly by stimulating the spinal nutrition-centers of organs by means of various physical measures and forces.

Life often is a warfare between ideal health and triumphant disease, in our organs as elsewhere, and when the power of initiative attack has been restored to the trophic or nutritive forces of such a member by the crippling of the enemy, by whatever means this may be accomplished, nature will "consolidate" the victory—in the wording of the war-bulletins—by removing the debris and rebuilding the devastated cell-complexes.

The newer surgery is, at times, applicable to certain nonmalignant growths within organs, the exact nature and cause of which are not yet understood, the forces employed either killing a causative germ as yet unrecognized or else correcting the deviated nutritive processes by stimulating the natural ones if no germ be present. An example of this is the fibroid tumor of the uterus the removal of which by the knife has become a common, though always a serious operation of distinctly major character. We do not know the cause of these overgrowths of fibrous tissue, but we do know that they rarely endanger life, and that thirty years ago a successful method of causing their slow absorption was devised by Apostoli, of Paris, who employed powerful electric currents in a nondestructive manner. This measure has proved successful in a large number of cases, but it has the disadvantage of requiring considerable time. Recently this method has been supplemented by the Roentgen rays, and now but a very small percentage of the organs containing these growths have to be sacrificed. A report from a German clinic issued just before the war gave an account of 350 of these growths that had been placed under this treatment, in which disappearance of symptoms and decrease of the growth had been noted in 100 percent of the subjects. Many similar reports have been published in this country.

It may be argued that this procedure should not be called surgery. So strong is the belief that "surgery" means the use of the knife that the actual meaning—derived from the Greek word signifying hand-work, has become obscured. The term surgery should rightly include personal operative work for the rectification of bodily disease by other means than the knife, as well as the latter.

Malignant Neoplasms and Bloodless Surgery

A different question than that concerning the nonmalignant tumor is involved when we consider the proper treatment of local aggregations of known parasitic organisms, such as tuberculous or cancerous tumors. In the latter particularly, the desideratum is immediate and complete removal of the growth, and this should include the organ itself, if necessary, since the preservation of life is above all other considerations. Whatever ensures complete removal in the early stages, when removal still is possible, will be the surest method of saving threatened life; and, if it be necessary, no hesitation whatever should be shown in including the organ containing the growth. Here, the knife is oftener the surer way to a cure than its improper use in the late stages has led us to believe.

However, unless complete removal can be accomplished by the knife in a widesweeping operation that does not wound the cell-colony itself, it had best not be used. A knife used on a hornet's nest could not be worse in scattering the trouble, except that in the latter case the operator himself would be the sufferer. The difficulty resides in the vigorous life of the individual cells of the cancer-colony and in the ease with which detached cells may implant themselves in a freshly cut wound in a body in which they have already overcome tissue resistance. Auto-infection, or the reimplantation of disease in

another part of the body, is easy of accomplishment; in fact, is commonly present in persons suffering from these affections, though implantation in another person is practically impossible. It would seem that the flesh of a sufferer is good soil for such seed. The attempt to remove some of these still-living colonies with the knife may also be likened to the difficulty in removing a weed from the garden after it has gone to seed, without first devitalizing its ripened seeds. A sharp hoe will surely permit the living seeds of the weed to reimplant themselves in the stirred earth. A fire will destroy both plant and seed.

The Aim of the Newer Surgery

The newer surgery aims to destroy the living cells of the tumor before its removal, the measures being chemical, electrochemical or electrothermic power, employed in a local and controllable intensity that no living germs or cells can escape. These methods also seal the surrounding absorbents, require but little anesthesia, are bloodless, and are believed to yield better final results than will cutting operations, in suitable cases.

The artistic rather than deliberative traits of the conventional surgeon have left another opening for this newer surgery in the treatment of relaxed nerve and muscular structures. An ultra-mechanical bias has led to the cutting and sewing of muscles for simple relaxation or wasting, instead of using stimulating and invigorating local measures. One does not hear of the cutting and sewing of the muscles of athletes when in training for a race, yet, whole libraries of books have been written that describe various cutting- and sewing-operations for relaxed pelvic muscles in women, and recently a great meeting of one of our largest county medical societies was devoted to addresses by the five originators of as many such operations for these muscles. One of the originators, however, had the boldness and what might be called aftersightedness to condemn at this meeting all such operations as unscientific.

In the newer surgery, these muscles are gradually strengthened by forced exercise by means of electric-current waves, which are turned on and off and reversed painlessly by an automatic mechanism.

A more serious error is the recent proposition of the eminent English surgeon, Sir Arbuthnot Lane, to employ the knife in relaxed intestinal muscles. Taking "tucks" in these organs or "tacking" relaxed sections of the muscular tube in place would seem about as useful as a similar effort to restore elasticity to an elastic tube in which the rubber had crystallized. This surgeon, to whom we owe a fuller recognition of the great importance of sagging abdominal organs as a cause of ill health, also failed to take cognizance of the important nerve groups in the abdomen that govern these very structures—the sympathetic nervous system.

Whether forgotten by surgeons or not, the sporting-pages of our dailies indicate full cognizance by pugilists of the "solar plexus" as something that is intimately related to life itself. Jenner found the milkmaids of Yorkshire familiar with the value of vaccination when he knew nothing of it. One of them said to him, "Didn't you know that?" when he spoke of the rumors that cowpox would ward off the smallpox. It is to be hoped that we shall not have to turn to the pugilists to relearn the importance of the abdominal nerve groups that govern the automatic functions of life.

The newer surgery endeavors to meet this need for reinvigorating both the abdominal nerve groups and the intestinal muscles; and there is much evidence that the latest form of electric waves to be employed, the galvanic sinusoidal current of large amperage, will carry sufficient energy-waves painlessly through the abdominal walls to stimulate directly these enervated tissues. Other physical forces may also be used to stimulate indirectly definite zones of abdominal organs, by stimulating the roots of spinal nerves. This is accomplished by passing the stimulating force through the skin overlying these nerves.

True Lesson of the War

It is the expectation of many that the great war will result in important advances in surgery. This is extremely likely to be true in so far as the treatment of injuries is concerned, but not necessarily outside this narrow field. Preventive medicine has greater opportunity for advancement through increased application of state administration. The lesson of this war vouchsafed to surgery is a different one. It is, that increased efficiency often needs newer armament. A warring power that restricts its weapons to one tool, even though this be a sharp one, will fall before those that employ liquid fire, gases or any other agency that is more effective in destroying the enemy.

A Few Dependable Therapeutic Suggestions

By A. D. Dumas, M. D., Natchez, Mississippi

THE obscuration of great intelligence under the spell of therapeutic nihilism has prompted me to offer a few practical and dependable suggestions based upon my experience during sixteen years of general practice. It is my hope that these thoughts may help to inspire more confidence in the efficiency of drug-therapy and stimulate research in the field of internal medicine, which in these days has been eclipsed by the brilliant achievements of surgery.

The only branch of internal medicine that has kept pace with medical progress is that of serum-therapy. Of late, the administration of drugs intravenously and subcutaneously has done much to place internal medicine again in a place of honor.

Of course, a comprehensive knowledge of the materia medica and of therapeutics is essential to drug-medication, while a thorough understanding of physiology and pathology is no less important; in fact, these branches constitute the bedrock upon which the successful physician must build. Without these, he is in no position to appreciate fully the therapeutic indications and contraindications for his remedial agents. But no less must he be familiar with correct dosage, for upon this may hinge success or failure.

Avoid Dominating "Rules"

No hard and fast rule should dominate the clinician when it comes to the administration of drugs, for each case is an entity in itself, and, too, the idiosyncrasies of the individual must be considered. Otherwise, even though the right drug was selected, the dosage may be inappropriate, and thus the object sought defeated; thereby destroying the physician's confidence in his otherwise effective remedy and paving the way to skepticism.

Our slogan should be, "Dose enough."

Besides not knowing how to make the best use of his remedies, many a doctor loses faith in drugs and becomes a rampant therapeutic nihilist through having been unfortunate enough to have been prescribing or dispensing worthless drugs and preparations foisted upon the market by conscienceless manufacturers and dealers or which have deteriorated in stock. Naturally, such disappointment drives men to confine themselves to the more alluring and remunerative field of surgery. That in the end such a course works injury to medicine as a whole, cannot be gainsaid.

Success must be built upon dependable therapeutics. We should lift ourselves out of the slough of nihilism and incompetence by a systematic study of our drugs and by using only drugs of known full physiologic action. No physician should content himself with a mere smattering knowledge of a drug, for, simply to know the name and dose of a drug and perhaps a few indications for its use is empiricism. If a drug is worthy of trial or has any reputation for dependability, it should be studied from every angle, theoretically and at the bedside. In selecting our remedies, we should choose only those known to be absolutely reliable and constant. Thus many of the galenics should as far as practicable be discarded. Ordinarily, the tinctures and fluid extracts found in the average apothecary-shop have been in stock for a long time and many have deteriorated.

Galenical Confusion

One very important point is the fact that some potent drugs contain more than one active principle, the action of the one being antagonistic to that of the other. Therefore, even if for no other reason, we should resort to the always constant and dependable active principles. For example, take opium, which contains twenty or more different alkaloids, no two of them possessing exactly the same physiological properties. Consequently, if we desire the anodyne, hypnotic, and antispasmodic effect of opium, we should select morphine, the main alkaloidal principles of opium, and the one upon which its chief effect depends.

A further advantage consists in the fact that we know just how much of our drug the patient is getting. There we are not in a quandary as to whether the dose is too large or too small. This is what I call "therapeutic precision." Another example is afforded by digitalis, with its three or four very different principles—digitalein, digitonin, digitoxin and so forth.

Now let us take up the subject announced in the title of this paper.

Flush the Intestinal Canal

One of the best rules to follow when first seeing your patient—whether child or grown up—is, to see to it that the intestinal canal

is thoroughly emptied and disinfected. In other words, we should remember and practice the Abbott slogan: "Clean up, clean out, and keep clean" the alimentary canal; and calomel and podophyllin, 1-6 grain of each hourly, for six doses, then a laxative saline or castor-oil two hours after the last dose, will do the work admirably. The advantage of giving the calomel in fractional doses accrues from the stimulating effect the calomel has upon the hepatic cells, so that we get the therapeutic effect of the calomel, and not merely its mechanical cleaning that follows when a single large dose is given.

When you take into consideration the fact that the intestinal tract is the sewer of our body you can see the great good accomplished when it is thoroughly flushed out and disinfected. In my subsequent discussion of the various diseases, it will be taken for granted that the principle of clinical asepsis of the alimentary canal is the first step in our therapeutic propaganda.

Pneumonia, Pulmonary Hemorrhage, Uterine Disease

Pneumonia, one of the most fatal diseases, when properly handled, need not be the bugbear it is considered. In plethoric patients, a combination of veratrine, aconitine, and strychnine, every two hours, always acts beautifully in controlling the case, from beginning to end. In asthenic cases, a combination of strychnine, aconitine, and digitalin fits to a therapeutic nicety.

In pulmonary hemorrhage, emetine hydrochloride in 1-2 grain doses once or twice daily, hypodermically, with an ice-bag to the chest over the seat of the hemorrhage will immediately control the bleeding, and seems to have a favorable effect upon the pulmonary lesion.

Quinine and urea hydrochloride, in 10-grain doses, dissolved in 8 to 10 mils (Cc.) of warm sterile water and injected intravenously, will positively cure malaria in a few days.

In all nonoperative gynecological cases, syrup of iodide of iron, in 1-2 to 1 dram doses —continued for weeks and months, if necessary—will afford surprisingly good results when all of the rest of the uterine tonics have failed to give relief. In a large number of sterile married women who have no definite pathologic lesions of the adnexa, the iodides often remove the trouble.

When there is chronic endocervical catarrh a few applications of tincture of iron or Monsell's solution will be followed by the happiest results in many cases.

Cystitis—Acute and Chronic

In acute cystitis, of whatever origin, accompanied by great general nervous irritability, acidulate the urine by giving benzoic acid, 5 or 10 grains, in considerable water, every four hours, and follow it up with the following combination: urotropin, 7 1-2 grains; acetate of potassium 10 grains; sodium bromide, 10 grains; to be taken every four hours, well diluted. This will be followed by instant relief. If there be strangury, add tincture of belladona, 7 1-2 minims, to the above combination. In the chronic form of cystitis, irrigation of the bladder with a 1 : 5000 solution of potassium permanganate will add greatly to the patient's comfort and to the cure of the disease. Take up the slack by giving arbutin for a long time.

Aconitine is a remarkable remedy in the treatment of all inflammatory diseases of the respiratory tract. It does its work mainly by its action on the vasomotor system, by dilating the peripheral blood-vessels and thereby relieving the congestion from within, and lastly, by causing the blood to flow to the point of least resistance. That's the reason why it is so fine in pneumonia—it equalizes the circulation.

Treatment of Old Burns

In burns, where the true skin is involved and sloughing has ceased, you will be surprised to see how rapidly healing will take place from the application of an ointment of scarlet-red. If the area is large, be careful not to apply it too thickly, as it will interfere with granulation and may be absorbed in such quantities as to turn the urine scarlet-red, and, perhaps, also irritate the kidneys. It acts by stimulating the formation of new skin. You will find it equally serviceable in the treatment of nonspecific superficial leg-ulcers. Care should be taken to prevent the ointment from coming in contact with the linen, as it stains a bright-red, although easily removed.

In troublesome cases of intertrigo in fat babies and grownups, a dusting-powder of equal parts of the stearate of zinc and starch acts finely; it also is excellent for the weeping sores of pellagra-patients, as it controls the intense itching and checks the weeping by its desiccant action.

Slow Labor Pains

Pituitary solution is a powerful oxytocic and should be employed (with good judg-

ment!) in labor-cases. It acts with great violence and should not be given before the os uteri is thoroughly dilated. You also must be sure that the parturient canal is clear for the passage of the child, otherwise rupture of the womb or collapse of your patient may result from the violent and persistent contractions produced. It is a safe and reliable remedy in uterine inertia; in fact it has no equal. I have had the happiest results to follow six to ten minutes after its injection.

Eczema is an intractable disease and difficult to treat satisfactorily. If you will give a patient suffering from this affection a morning dose, for three or four mornings, of epsom salt or any other good laxative saline, and on alternate days give a mixture of strepto-staphylo bacterin, you will be pleased with the results. Not in every case, however, but still in a majority of them. There can be no doubt that the intestinal canal is at fault in most instances; hence, if we expect results, attention must be given to the great "sewerage-system" of our body.

When there is great disturbance in the vascular and nervous systems at the climacteric period of woman's life, a splendid combination to give is, tincture of digitalis, sodium bromide, and potassium iodide. I have yet to see a case when the hot flushes, dizziness and palpitations were not immediately relieved to the utmost gratification of the patient.

In acute gastrointestinal inflammation of children, absolute abstinence from food for twelve to twenty-four hours, with gastric lavage if vomiting is persistent, and also colonic flushing, will give immediate relief. Castor-oil is the best remedy we possess for the treatment of the intestinal disorders of children.

Always Use Antitoxin

It is entirely too hazardous to attempt to treat diphtheria without giving antitoxin, and in sufficiently large doses to make an immediate impression. It savors of criminality to neglect its use, as it is our only safe remedy. The danger from its use is not so much in giving too much, as giving too little. Give it early in the disease, do not wait to have your diagnosis confirmed by laboratory examination. I always rely upon my clinical diagnosis.

I have come to regard a moderate degree of abdominal distention in typhoid fever as being of advantage to the patient, because it keeps the intestine slightly distended and thus prevents the ulcers from coming into immediate contact with each other, as happens when the tube is collapsed. In this way, it prevents hemorrhage and stricture, by acting as a pneumatic tampon. Daily irrigation of the colon, using a rectal tube inserted high up, with a mild antiseptic solution, the administration of some good intestinal antiseptic, such as salol or sulphocarbolate every four hours, and a full dose of castor-oil every other morning, constitutes my best management of the average case of typhoid fever. A typhoid bacterin, given in full dose, assists in cutting short the disease. The clinical course of the disease is favorably influenced by the intravenous injection of 1-2 grain of emetine daily for three or four days, although it has been demonstrated that the emetine does not possess any bactericidal effect on the typhoid-germ.

Impetigo contagiosa is a very common disease of childhood and often difficult to cure. If you will remove the crusts and apply 10-percent ointment of copper oleate, thoroughly rubbed in the ulcers, results will be forthcoming. A great many children who suffer from impetigo are strumous and show other evidences of some constitutional dyscrasia. So, it is well to give internally some reconstrutive, such as the iodide of iron and the lactophosphate of calcium.

Nephritis of Alcoholics

In acute toxic nephritis of alcoholics, with high arterial tension and suppression of urine, lower the arterial tension by bloodletting, or such powerful revulsive as aconitine or veratrine. This accomplished, give internally large and repeated doses of epsom salt or any other good saline. Give iodide of potassium, which puts into solution the solids which should have been eliminated, and by its diuretic action mildly stimulates the kidney function. Besides, it neutralizes the excessive acidity and reduces the viscosity of the blood, by rendering it alkaline. At the same time, it exerts a vasodilating effect over the circulatory system and thereby maintains an equalizing influence upon the blood-vessels; thus relieving the congestion of the kidneys and permitting a return to the normal function.

There are many other diseases of equal importance that I did not mention in this paper, as its scope is too limited for me to cover the ground. So, I have given from my experience in only a few of the common diseases which the physician is called upon to treat in his daily practice.

What Others are Doing

CARREL'S STERILIZATION METHOD

In view of the intense interest manifested in the method of sterilizing wounds with hypochlorite solution and chloramine (chlorazene) employed by Dr. Alexis Carrel in his wonderful work in France, we reprint herewith a description of the method as given by Dr. W. O. Sherman of Pittsburgh, in an address delivered before the surgical section of the Royal Society of Medicine in London. The summary published in *The Lancet* (see issue of Nov. 4, 1916, p. 800) is as follows:

"The apparatus employed consists of a glass flask, graduated, to contain the Dakin fluid; from this comes a rubber tube, ending in a small glass tube, to which can be attached one or more rubber tubes. Each of these tubes is closed at the end, and in the sides of the tubes many small openings are made about a centimeter apart. The skin of the part is cleansed and painted with solution of iodine, and this is done whether the wound is recent or late. All foreign bodies are removed. The wound is laid open so that all parts of it may be reached, and the rubber tubes are passed into all the recesses of the wound; pieces of gauze are placed lightly round and between the tubes, so as to separate them, and at the same time the gauze will assist in retaining the solution in the wound, but the wound is not to be "packed." The Dakin solution is then allowed to flow from the container into the wound, and passing from the tubes it fills the wound completely. The wound should be refilled with the solution every two hours and re-dressed every day.

"The effect on the wound is striking. At first the number of microbes present is very great, in fact it may be called infinite; and many polynuclear leukocytes are present. But as the days go by the number of microbes steadily diminishes until very few are present, and when only one bacterium can be found in five ordinary fields of the microscope on five successive days the wound may be regarded as practically sterile, and it will be safe to employ sutures, for no suppuration will ensue, and not even a stitch abscess will develop.

"The sterility of the wound is strikingly shown by the fact that it is quite safe to plate compound fractures which have been sterilized in this way. If necrosed bone is present in a wound and cannot be removed, it will not be possible to sterilize the wound. The method is not applicable to the eye or to the peritoneal cavity; and the solution cannot be injected into the veins.

"Doctor Sherman gave particulars of many cases in which the method had been employed, and said that the mortality had been greatly reduced, and that amputations had become very much less frequent. Especially he claimed that the time taken for the complete healing of a wound could in this way be greatly shortened, saying that wounds which otherwise took months to heal healed under his technic in as many weeks. The percentage of failures was small, yet in order to obtain the best results the nurses and the assistants must be carefully trained."

LAUDABLE PUS AND THE SALT PACK FOR WOUNDS

The old adage that times change and we change with the times never has received more emphatic confirmation than in matters surgical, as a direct consequence of the experiences gathered in the European war. It is not so long ago that surgeons talked learnedly of laudable pus and looked for its formation on about the third day after an operation, they having learned from experience that thereafter healing of the wound would proceed, slowly, it is true, but safely. This "old-fashioned" view was upset and cast into the discard when we evolved out of the days of antisepsis and when the idea was pronounced and found general acceptance that, after a "clean" operation, the formation of pus was a disgrace to the surgeon. In emergency surgery, suppuration of wounds can hardly be avoided, but, here, too, every effort is bent toward its prevention, union by first intention being a consummation to be prayed for.

Diametrically opposed to this view, was the opinion of Doctor Duncan, that the pus formed in the wounded body was of importance for the healing of the lesion. Duncan's

"autotherapy" is based upon the effort to make available an immunizing stimulation to be secured through the agency of this pus, and it presupposes the correctness of the former views concerning "laudable pus." Doctor Duncan met many difficulties in advancing his opinion, but it is rather interesting to find now the exigencies of war surgery to have paved the way for a return of former opinions.

In *The British Medical Journal* for August 26, appeared an interesting report by Doctors Donaldson, Alment, and Wright, according to which, in actual practice, it sometimes is better that pus should form, even though it is true, as a purely academic proposition, that the ideal wound is one in which pus does not occur. The authors of this interesting article entered upon their military work with the preconceived conviction fully settled in their minds that pus is anathema anywhere within the sphere of activity of modern surgeons and surgical nurses. Experience taught them that in many instances it is wise to let the pus alone, and that the patient will be the better for it.

The method which the writers have found successful is as follows:

The wound is thoroughly opened up, irrigated, then packed with gauze baglets containing tablets of sodium chloride, and then covered over with a moist dressing. About a week intervenes before re-dressing. Sometimes symptoms arise which appear alarming, and self-restraint and confidence then are essential. Unless increased swelling, a persistently rising pulse, tenderness, and edema arise, the policy of noninterference should be maintained.

The objections that have been raised against this method of wound treatment, the authors aver, apply equally against other methods; excepting the one referring to the odor arising from a septic wound dressed only infrequently. They maintain that all objections are based upon theoretical considerations while their method is founded on practical experience and is, for this reason, entitled to a thorough practical trial.

PITUITARY SOLUTION IN POLYURIA

In a very interesting study of the effect of solutions of the posterior lobe of the pituitary gland on the renal function, Ketil Motzfeldt (*Jour. Exp. Med.*, Jan., 1917, p. 153) apparently has demonstrated that this substance exerts a marked antidiuretic effect; that is, it checks the secretion of the urine, especially when excessive, as, for example, in diabetes insipidus. Motzfeldt's experiments were carried out, mainly, with rabbits, these being found more suitable than dogs.

While, as said, the extracts of the posterior lobe of the pituitary body very decidedly reduce the excretion of urine, a similar although less marked effect is produced by extracts of the anterior lobe. Further, Motzfeldt found that similar antidiuretic properties are possessed by preparations of ergot as well as by its socalled active principles, beta-imidoazolylethylamine and para-oxyphenylethylamine. Other uropoietic drugs tested are: extracts of the adrenal cortex, nicotine in small doses, and caffeine in large doses. No effect upon the polyuria is produced by morphine, adrenalin, the extracts of the thyroid, thymus, and pineal glands, the extracts of the pancreas and corpora lutea, and strychnine.

These experiments have been supported by clinical evidence, which is summarized by Motzfeldt, who says that during the last three years a number of cases of diabetes insipidus have been reported in which pituitary extract had checked the diuresis to a considerable extent. As a sidelight, he brings out the importance of a salt-poor diet in the treatment of this disease, since the antidiuretic effect of pituitary solution is absent or only slightly marked during the socalled "salt diuresis."

SUGAR AS A REMEDY FOR LEUCORRHEA

In *The Boston Medical and Surgical Journal* for October 5, 1916 (p. 500) we find a description of a method of treating leucorrhea, as employed by Zweifel, as follows:

"Following the suggestion of Kuhn, Zweifel has employed sugar in 50-percent solution, introduced on a tampon and left for twenty-four hours. The patient then uses a douche at night on going to bed. The patient is instructed to put 2 teaspoonfuls of sugar into the irrigator, and 2 teaspoonfuls of very hot water on the sugar. The solution is then cooled and introduced into the vagina, after which the patient goes to bed. The treatment is continued, at home, for eight or ten days, after which the patient returns for consultation.

"Of 66 cases so treated, two-thirds came back, and these showed very satisfactory results. A few, however, were resistant, and formalin was applied to the cervical canal. In the cases still resistant, lactic acid in solution of 1-2 percent was employed. If

this strength causes burning or irritation, it may be diluted. This general line of treatment gave satisfactory results and, as the patients were kept under observation for some time, the beneficial permanent effects were determined.

ON THE INFLUENCE OF COCAINE UPON THE ARTERIAL ACTION OF ADRENALIN

Even minute amounts of cocaine are capable of increasing the susceptibility of the vascular system to the action of adrenalin. Investigating this subject further, R. Fischel, of the German university of Prague, finds (*Zeit. f. d. Ges. Exp. Med.*, 1915) that this influence is greatest when the two agents are applied simultaneously; that is, contained in the same solution. Such action is not evidenced or in a greatly diminished degree when the cocaine has been applied before the adrenalin or while the action of the latter already is on the wane.

NEW TREATMENT FOR BRONCHIAL ASTHMA

A very interesting article is contributed to *The Archives of Internal Medicine* for October 15, 1916, by Doctors Kahn and Emsheimer, who suggest the use of autogenous defibrinated blood in bronchial asthma. This procedure is based upon the assumption that the spasm of the bronchi by which the symptom of asthma is produced is due to anaphylaxis; that is to say, a sensitization by some protein that may have gained access to the body by way of the nasopharynx, the respiratory system, or the gastrointestinal tract.

If this be so, then a rational method of treatment would be, to bring about active immunization by means of repeated injections of very small doses of the particular protein causing the trouble. This latter object, according to the authors, can most easily be accomplished by the use of defibrinated blood taken from the patient himself, preferably during a paroxysm. This blood serves as an antigen in the same way that dead bacteria (bacterins) serve as antigens in diseases consequent upon bacterial infection.

Six patients suffering from bronchial asthma were successively treated in this manner and all experienced definite improvement, as indicated by a reduction in the frequency and severity of the attacks, as also by a gain in weight, increased ability to work and amelioration of subjective symptoms.

The amounts of the defibrinated blood employed in these injections varied from 15 to 25 mils (Cc.) repeated at intervals of about a week. The serum was obtained by bleeding into a sterile 1-ounce flask that contained a number of glass beads. This blood then was agitated for from five to seven minutes in order to separate the fibrin, after which the serum was drawn into a 30-mil hypodermic syringe and injected immediately. Ten injections were made in each case.

ANIMAL-CHARCOAL SUGGESTED AS A TETANUS PROPHYLACTIC

In a communication to the *Deutsche Medizinische Wochenschrift* (1915, p. 393), Kraus calls attention to the fact that already in 1909 he, in association with v. Eissler and Fukuhara, had written about the strongly detoxicating property of animal-charcoal by virtue of its high absorptive power. Latterly he and Barkara, at the National Bacteriologic Institute at Buenos Aires, verified the claims of Wiechowski and Starkenstein as to the remarkable power of this substance in binding bacterial toxins (notably of dysentery, cholera, diphtheria, and hydrophobia), and, in consequence, the authors venture to suggest that wounds suspected of being infected with the tetanus-bacillus be covered, as a prophylactic measure, with the powder.

CONCERNING THE RESTOR TION OF THE NORMAL CONCENTRATION OF THE BLOOD-SERUM

By means of refractometric methods, the return of the blood-serum to its normal degree of concentration, after loss of blood, has been fairly well determined, and now this method has been applied by J. Loewy, of the Medical Clinic of Prag (*Deut. Arch. f. Klin. Med.*, 1915), to operative cases involving the endocrine gland, in which dilution of the serum through loss of blood is excluded.

These optical measurements were applied on successive days after removal of, respectively, 13 colloidal goiters and 2 uterine carcinomas. In 6 of the goiter-cases, the refraction index was unaffected; in 1, it rose; in the remaining 6, it dropped. In the cases of uterine cancer, involving extirpation of the womb and ovaries, the index was lowered. Iodothyrin administered during two days caused the refraction-index to rise, from 53.4, to 57.6. Iodine-free thyroidin was without effect; iodine caused a slight rise. As to dilution from losses of blood, the

concentration of the serum is ordinarily restored in about ten hours.

PICRASINE: AN IMPROVED PICRIC-ACID PREPARATION

Picric acid, as is known, not only stains the skin, but through absorption may affect the kidneys. These undesirable qualities, besides its inflammability, are said to be overcome by making it into an ointment by incorporation with glycasine, in the strength of 2 : 100. The latter is a German proprietary ointment-base, and to the combination the manufacturer applies the name of picrasine; although anyone is at liberty to prepare such a compound. The glycasine presumably is some form of starch, gelatin or agar-glycerite.

Dr. H. L. Heusner, of Giessen (*Muench. Med. Woch.*, 1915, p. 40), has found this compound very satisfactory, the pain of burns disappearing quickly under its use, while healing proceeds rapidly. It is also useful in furunculosis, oozing eczema, and leg-ulcers.

THE POSSIBLE ROLE OF BOOKS IN THE DISSEMINATION OF CONTAGIOUS DISEASES

Dr. C. A. Laubach (*Johns Hopkins Hosp. Bull.*, 1916, June, p. 183), from the results of his experiments relative to the possibility of infection being transmitted by means of books, arrives at the following conclusions:

Pathogenic bacteria can seldom be isolated from books that have been handled by sick persons, and there is, therefore, no empirical reason for maintaining that books serve as vehicles for infection.

Direct sunlight and diffuse daylight are the most efficient germicides for organisms found on books, as they are for the same organisms under other conditions.

The fact that pathogenic bacteria, like the typhoid-bacillus and diphtheria-bacillus, can be recovered from artificially infected books, under various circumstances and after long periods of time, and the further fact that the diphtheria-bacillus does not lose its virulence during this period is a sufficient reason for insisting upon the thorough disinfection of books that have been handled by sick persons.

THE DANGERS OF NITROUS-OXIDE AND OXYGEN ANESTHESIA

Some years ago, when nitrous-oxide-oxygen anesthesia was elaborated for major and protracted operations, it was heralded mainly for the ease of its application and, even more, because of its freedom from danger, which was asserted to be practically absolute. The disadvantage lay in the fact that a complicated apparatus was required; but as the administration of anesthetics has more and more been given into the hands of specially trained anesthetists, it was believed that this point could be waived to a considerable degree. The principal point of superiority of this new general anesthetic, especially over ether, was seen in the absence of postoperative pneumonia, which was urged against the employment of ether as the greatest objection to this otherwise quite safe agent. The death rate from ether is given as 1 in 50,000, and for chloroform as 1 in 2000; while from nitrous-oxide-oxygen there were said to be virtually no deaths.

Now comes Dr. J. F. Baldwin, in *The Medical Record* for July 29, and claims that this mixture of nitrous oxide and oxygen is the most dangerous anesthetic of all. By a number of case-reports, he shows that under its influence death may occur without the slightest warning, when everything apparently is going beautifully, and he figures that the death rate from this much heralded anesthetic was about 1 percent of 12 or 15 hundred administrations for major operations performed in Columbus (Ohio) alone.

As to the danger of postoperative pneumonia, which is asserted to be so great when ether is employed (and of which one case has been reported even after nitrous oxide with oxygen inhalation), Baldwin cites Rovsing to the effect that Mikulicz has shown years ago that this complication can not justly be attributed to the action of ether. The fact that it is observed practically exclusively after laparatomy suggests that the peritoneal infection is conveyed to the ungs, partly by way of the lymph-vessels and venous blood and partly by embolism; further, a patient with a laparatomy-wound does not dare to breathe freely or to cough, owing to the pain. If such a one already is suffering from bronchitis or if an infection of the lungs sets in, the development of pneumonia is then greatly favored by the deficient expectoration and ventilation of the lungs. In short, it seems that postoperative pneumonia has been charged to ether without just cause.

Under the circumstances, one may well hesitate to employ the nitrous-oxide-oxygen anesthesia for major operations. Doctor Baldwin concedes to this gas a limited field of usefulness, which is found mainly in very

brief operations, as it has been used for many years in the extraction of teeth. It is also probably the safest anesthetic to use, as suggested by Ochsner, in cases of acute pulmonary congestion or of acute nephritis. With these exceptions, which make its field a very limited one, Baldwin concludes, nitrous oxide with oxygen should be looked upon as the most dangerous anesthetic that can be employed, even in the hands of the most experienced.

Now—there should be a campaign of fierce denunciation of nitrous oxide; but there won't be!

PHYSOSTIGMINE IN CHRONIC CONSTIPATION

In a fine paper on the treatment of constipation in women, printed in *The Lancet-Clinic* for May 13, 1915, Justin Herold says that physostigmine is a useful remedy for the treatment of chronic constipation. Constipated women, at the change of life, who suffer from headache, vertigo, and flatulence are benefited by the intelligent prescription of this remedy.

DIGITALIS IN INFECTIOUS DISEASES

The administration of digitalis preparations usually is held to be indicated in certain forms of heart disease in which it is desirable to lessen the frequency and to strengthen the power of the contractions, and also in cases of cardiovascular disease in which a diuretic effect is desired. In some acute infectious diseases, for instance in pneumonia, digitalis is given for the purpose of steadying and supporting the heart's action. According to W. G. Fralick, writing in *The Medical Times* for August, it has been shown by several authors that hyperleukocytosis occurred in favorable cases of pneumonia after the administration of digitalis, while in cases terminating unfavorably hypoleukocytosis was observed.

Fralick takes these reports to indicate that in all probability it is correct to ascribe the favorable influence of digitalis, given before and after surgical operations, not exclusively to its well-known effect upon the heart-muscle, but also to its constant stimulation of leukocytosis. A series of observations which the author made in several cases showed a decided increase in the total number of leukocytes after the administration of digitalis intravenously and by mouth, the increase affecting the polynuclear leukocytes. The effect was more marked after the intravenous injection of the drug.

The author attributes considerable importance to his findings from the point of view of preparing patients for operation, since functional leukocytosis may be regarded as the expression of the biological defensive reaction of the infected or intoxicated organism. If, then, a hyperleukocytosis can be induced by the action of digitalis previous to operative interference, in addition to its strengthening and supporting influence upon the heart, the value of this remedy evidently is enhanced, in that it increases the resistance of the organisms against a possible operative infection, and also against postoperative complications.

IMPOTENCE IN THE MALE TREATED WITH ANTERIOR PITUITARY

The treatment of impotence in the male is an ever-present problem that usually is associated with many difficulties and disappointments. One reason for this, undoubtedly rests in the fact that it is so difficult to obtain truthful and correct information concerning the sexual life of our patients, since for some reason or other the word of the psalmist, that all men are liars, is true particularly with reference to what they say about this matter; and it might be added that women are just as bad. Still, sexual impotence is a curse that should arouse the sympathetic interest of the physician; indeed, nothing is more inappropriate and more cursedly wrong than the customary half-joking, half-sneering manner in which physicians are apt to put off their patients who consult them about their waning sexual powers. It means either, that the doctor knows nothing about the matter, or that he is a plain damfool. No wonder these poor devils contribute so largely to the fat bank accounts of quacks. We physicians are to blame; and now we howl and cry out at the wickedness of the quack.

The recent researches on the functions of the ductless glands have done much to improve and widen our understanding of many physiological and pathological processes, and to enable us to treat a variety of functional disorders with far better success than used to be possible. Of late the preparations of the pituitary gland particularly came into the foreground of our materia medica, and now it is being recognized that the anterior lobe of this organ, which used to be considered as useless, is of actual value in various conditions. In *The New York Medical Jour-*

nal for November 4, Doctor Stellwagen reports his experiences in six cases of impotence in the male, in which he succeeded in restoring the lost function, by prescribing a 5-grain tablet of the desiccated anterior lobe of the pituitary body, three times daily, after meals. In some of the cases, prostatic massage was added to the treatment. When necessary the diet was regulated, and the patients, of course, were enjoined from straining their sexual power during the period of treatment; indeed, its exercise was interdicted. The favorable results observed by Doctor Stellwagen justify the expectation that, in the anterior lobe of the pituitary body, we possess a remedy which is of decided assistance in restoring some of these difficult cases to normal.

CONGESTION IN THE TREATMENT OF CEREBROSPINAL MENINGITIS

Doctors Forbes and Cohen, of the Brighton (England) Isolation Hospital, advocate a mode of treatment of epidemic cerebrospinal meningitis in which congestion of the cerebral vessels is brought about by raising the foot of the bed, so that the bed and the patient's body make an angle of from 14 to 23 degrees with the floor (*Lancet*, May 27, 1916). No pillows are allowed. The authors have found that this procedure influences the course of the disease profoundly and in a favorable manner. They recommend the treatment by congestion particularly in that class of cases which seem all but to get over the illness, but then become chronic and end fatally; but it was found useful also in the earlier stages of the attack.

In producing congestion of the cerebral vessels in this manner by posture, a normal temperature and free movement of the head resulted in a few days, in mild cases, after which recovery progressed uninterruptedly. In more severe cases, a rise of temperature occurred, and recovery was more gradual, being at first accompanied by an increased tension of the cerebrospinal fluid and a greater migration of polymorphonuclear cells. Raising the bed too high, may produce very severe headache and persistent vomiting. When this happens, the bed should be lowered and the tension of the cerebrospinal fluid relieved by puncture, after which recovery was found to take place. The height to which the foot of the bed is raised must be regulated according to the individual requirements of the patient.

Sometimes it is advisable to employ the treatment in increasing degrees, starting with only slight raising of the foot of the bed. When the patient begins to show a marked reaction or when he can move his neck more freely, the bed is left at the same angle until some seven days after apparent recovery, when it is gradually lowered.

The patients should lie on their backs as much as possible during treatment and should have no pillows. When marked retraction exists and the patient cannot lie on his back, the bed should be tipped sideways and the head allowed to hang over the lower edge. This method, which is somewhat drastic, has been practiced for not to exceed two hours at a time. The authors consider it a serious mistake to perform puncture when the patient is progressing toward recovery or apparently has recovered.

MENINGOCOCCUS-CARRIERS CHLORAZENE FOR CLEANING UP

The leading article in *The British Medical Journal* for November 18 (p. 673) is a discussion of methods of freeing chronic carriers of their infesting meningococci, the authors being Lieut.-Colonel M. H. Gordon and Capt. Martin Flack, of the Royal Army Medical College (British Army Medical College). This article also is discussed editorially in the same issue. The importance of this discussion may be grasped when it is understood that outbreaks of cerebrospinal meningitis among soldiers at the present time are common and apparently traceable to carriers.

It is of interest to learn that, although as a rule, the carriers are free from symptoms, they do not always escape, and it seems to be a fact that they are the principal source for the transmission of the disease itself. Gordon and Flack have subjected to study more than 200 of these carriers, and one result is, that the carriers considerably outnumber the active cases.

Various remedies were tried to rid the noses and throats of the carriers of the meningococcus. The highest degree of success was obtained with the chlorine-carrying antiseptic discovered by Doctor Dakin and known in England as chloramine and in America as chlorazene. This antiseptic, the authors say, "has the advantage of combining apparently high bactericidal value with low toxicity, and in the strength used during the present experiments it does not coagulate albumin."

Their experience demonstrated that in cases in which the nasopharynx yields only

a few colonies of meningococcus; these will quickly disappear after the direct application of a 1-percent solution of chloramine and causing the subject to inhale a steam spray charged with zinc sulphate. On the other hand, carriers whose nasopharyngeal secretion yields a copious growth or a virtually pure culture of the meningococcus often are far more difficult to cure. The results obtained with the zinc salt in these cases were disappointing. In striking contrast with the latter, was the success obtained with chlorazene when used with a specially devised steam-spray apparatus capable of atomizing a 1- or 2-percent solution of the disinfectant at the rate of 1 liter in twenty minutes in a room of 750 cubic feet. The carriers remain in this room during all this time, inhaling the air through the nostrils.

As already stated, the chlorazene, in 1- or 2 percent solution was found the most satisfactory. Next to this, the zinc sulphate in 1.2-percent solution was most effective. Eusol (a standard sodium-hypochlorite solution) also was tried, but found more irritating and less efficient than the two former substances named.

In commenting upon these experiments, the editor of *The British Medical Journal* says:

"The best of the antiseptics employed was a 2-percent solution of Doctor Dakin's chloramine-T; this was found to give better results than either eusol-solution, which proved more irritating and less efficient, or a 1.2-percent solution of zinc sulphate. It is essential in this disinfecting-treatment that the patient should cooperate by inhaling the antiseptic spray through his nostrils with vigor and persistence. The results obtained show that a large proportion of the chronic meningococcus-carriers, who are, indeed, a real but often unrecognized source of danger to the community, can be definitely freed from the meningococcus by the spray treatment in a comparatively short time. Some evidence was also obtained to show that the droplets of chloramine-solution might penetrate far into the air-passages—a point of interest to those who have to treat patients with such refractory diseases of the lungs as chronic or putrid bronchitis and bronchiectasis."

BISMUTH SUBNITRATE IN THE TREATMENT OF ACUTE URETHRITIS

In the treatment of acute urethritis, the first consideration undoubtedly is, to secure physiological rest to the extent this is possible and to allay the irritation resulting from the acute inflammation of the mucous membrane. The next requirement is, to counteract the effect of the infectious virus present and to prevent its further multiplication. In the opinion of Dr. H. W. Howard (*Urolog. & Cutan. Rev.*, Nov., 1916), "rest and bismuth, as remedies, are closely interlocked," and, "for some reason, bismuth has a subtle influence in inhibiting the growth of bacteria." Accordingly, Doctor Howard's method of treating acute gonorrheal urethritis consists in the employment of bismuth and collargol-solution and securing rest.

As already indicated, the bismuth is intended to aid in securing rest for the irritated mucous membranes and also to prevent the further growth of the gonococci. The soothing action of bismuth upon the inflamed mucous membranes is well evidenced in its employment in acute enteritis; and we are under the impression that its inhibitory influence upon bacterial growth may be explained as owing to a process to adsorption, similarly as it is observed after the use of kaolin powder. For practical purposes, Doctor Howard looks upon the inflamed urethra as a sinus requiring surgical treatment, and he has utilized Dr. Emil Beck's idea of introducing the bismuth paste in tuberculous sinuses.

The therapeutic element of rest for the urethra is brought into play by restricting the intake of fluid, so that the frequency of urination is reduced to not more than three times in twenty-four hours; that is, before retiring, on rising, and at the patient's visit to the office.

The injection of the bismuth is carried out as follows: A dram of bismuth is added to an ounce of sterile water, the mixture is well shaken and a urethal syringe is filled with it. The patient lies down and then, holding the urethra in an upright position, gently injects the contents of the syringe. He then closes the meatus with the forefinger and thumb and maintains the urethra upright for about two minutes. This, because of the high specific gravity of the bismuth, permits it to settle into the most dependent portion of the urethra. After a proper time, the thumb and forefinger are gradually relaxed, so as to allow a slow escape of the supernatant water, thus leaving the bismuth in the deeper parts of the pendulous urethra, from where it distributes itself evenly over the mucosa and so continually exercises its inhibitive and protective influence until washed out at the next micturition. This procedure may be re-

peated every morning and evening by the patient himself, but is to be supplemented by the injection of a 5-percent collargol-solution by the physician some time about the middle of the day when the patient pays his regular daily visit at the office.

Doctor Howard does not attempt to retain the collargol-solution within the meatus by means of finger pressure upon the glands, claiming that thereby the solution would be forced down from just that portion of the urethra that is most in need of it. He prefers to support the glans lightly in the upright position and simply to close the meatus by gently applying the index-finger to it. In this manner, the liquid is retained within the anterior portion of the urethra for a sufficient length of time..

IMMUNIZED GOAT'S MILK FOR THE PREVENTION AND CURE OF TUBERCULOSIS

The idea of making use of socalled immunized milk for the prevention and treatment of tuberculous diseases is promoted enthusiastically in this country by Dr. Julius Rosenberg, of New York, who has published several communications on the subject; one, for instance, in *The Medical Record* for November 27, 1915. Doctor Rosenberg makes use of the fact that specific antibodies against the tubercle-bacillus are secreted with the milk, and believes that this food may be employed deliberately for the purpose of preventing and treating tuberculosis, by feeding infants and children with the milk of cattle that have been immunized by means of tubercle-bacillus emulsion. Where it is not feasible to immunize cows in this manner, Doctor Rosenberg suggests utilizing goats for the purpose.

This idea is, of course, not new, having received expression by Professor von Behring in his famous address before the German Society of Naturalists and Physicians in Cassel as long ago as in 1903. Unfortunately it seems that the procedure is not practicable. At least Franz Hamburger showed later that antibodies against the tubercle bacillus that are present in the milk, whether of nursing women or of cows, are absorbed unchanged in the intestines of the infants only during the first few weeks of life and that afterward they undergo chemical changes and are broken down, the results only of their cleavage being assimilated. If this is true, the use of socalled immunized milk would be an illusion; but we are reminded of the fact that often certain things have been asserted to be impossible, theoretically, but that some practitioner went ahead and did them nevertheless. At any rate, the results which Doctor Rosenberg reports are encouraging.

We are particularly impressed with his suggestion to make use of the goat as a donor of milk. For small families living at the outskirts of cities, where there are vacant lots, the goat furnishes an inexpensive and excellent source, supplying, as it does, a very nutritious, digestible milk, which will be free from any offensive taste and odor provided "Billy" is kept away from "Nanny."

If it is desired to use "immunized" milk, the treatment of goats with tubercle bacillus emulsion is an easy matter, and it can do no harm, in any case, while it may be of benefit.

It is undoubted that the milk of immunized animals has some specific antituberculous power, it is even possible that Hamburger's objections are not valid and that such milk may afford more protection than is based merely on its nutritional value. In any case, the use of absolutely fresh milk, that is, milk not older than twenty-four hours, is preferable and of greater benefit to the little ones if only on account of the vitamines that it is said to contain; and this advantage is assured by the keeping of a family-goat.

THE INTERPRETATION OF BLOOD-PRESSURE READINGS

The study of the blood-pressure is a recent method for determining the efficiency, or otherwise, of the circulation. Although it has suffered its share of ridicule, the same as have other procedures of detailed and exact diagnosis, as being useless, play to the galleries, plain bluff, and the like, it cannot be disputed that a correct and complete diagnosis requires an inventory of, and attention to, the functioning power of all organs. The importance of the circulatory system, in health and in disease, needs no discussion, and all means of determining its exact condition must promote the correct study of the problems confronting the physician in a given case of disease.

The interpretation of blood-pressure readings as a measure of circulatory efficiency recently formed the subject of an instructive study undertaken by Dr. W. L. Berring, which was published in *The Journal of Iowa State Medical Society* for July. Without entering into the details of Doctor Berring's discussion, it will be advantageous to study his con-

clusions. Summarizing some of the significant facts, it may be said:

1. A comparatively low systolic pressure, with a comparatively high diastolic pressure and consequently low pulse-pressure, may mean myocardial weakness, with chronic nephritis, arteriosclerosis, chronic toxemia or arterial spasm.

2. A low diastolic pressure, with a comparatively high systolic pressure and excessively high pulse-pressure, may mean several things; namely: a purely functional condition, a compensated aortic insufficiency, myocardial degeneration without much arteriosclerosis, chronic nephritis or vasodilatation from any cause.

3. The diastolic pressure seems to be more stable than the systolic, and the movement of the diastolic pressure beyond the normal range seems to be a sufficient cause for raising of the pulse-pressure if an adequate circulation is to be kept up.

4. A low systolic pressure, provided the diastolic pressure is sufficiently low to provide an adequate pulse-pressure, does not necessarily mean a poor circulation, though it does seem to imply a diminished reserve power of the heart.

5. A systolic pressure of 100 or lower in an adult or a diastolic pressure of 100 or higher, if persistent, suggests disease and may call for treatment.

6. A pulse-pressure as low as 20 or as high as 60, if persistent, may be pathologic.

7. Chronic nephritis seems regularly to be attended by a high diastolic pressure and a high pulse-pressure, which is adequate as long as the myocardial reserve power holds out.

8. Arteriosclerosis, as a rule, seems to produce marked elevation of the blood-pressure only when the blood supply of a vital organ is disturbed or when the aorta is affected.

The effect of therapeutic procedures on abnormal blood-pressure must be interpreted in the light of several facts, notably the following: The elevation of the blood-pressure, both systolic and diastolic, as well as diminution of pulse-pressure, is more regularly symptomatic.

Therapeutic procedures intended to correct abnormally high blood-pressure, in order to be rational, should be directed as far as possible to removing the causes of the abnormal pressure, and only in exceptional cases should the treatment of high blood-pressure be symptomatic, namely, when continuance of existing high pressure threatens accidents to the cardiovascular apparatus.

In the treatment of abnormally low blood-pressure, a removal of the causes as far as possible should be attempted; also, and more generally than in high pressure, symptomatic treatment may be administered. The nitroglycerin test is useful in determining whether the hypertension is due to arteriosclerosis or chronic nephritis. It affects the latter condition, but not the former.

Many of the heart-stimulant drugs do not seem to raise the blood-pressure, but even when they do not produce an elevation of the systolic pressure they often appear clinically to improve the circulation, suggesting that the efficiency of the circulation, that is, the movement of the whole volume of blood, does not depend altogether on the blood-pressure conditions. It is conceivable that a drug, which lowers the blood-pressure, may improve the circulation by lowering the diastolic pressure more than the systolic, thereby increasing the pulse-pressure. Such may be the case with nitroglycerin.

The clinical significance of variations in the systolic and the diastolic blood-pressures and the pulse-pressure is a particularly difficult subject to deal with, both in its entirety and in its parts, not only because it is comparatively new and has not been studied thoroughly, but because of intrinsic difficulties. The possibilities of error in observation and of confusion of data are present in an unusual degree.

The neurotic factor in the patient and the personal factor in the observer require considerable allowance to be made in the interpretation of blood-pressure findings and in the estimation of therapeutic procedures.

The estimation of blood-pressure results on no account must be regarded as superseding or rendering unnecessary the use of other sources of information regarding the condition of the circulation. Error from misuse of the results of blood-pressure estimation, by blind adherence to mechanical standards, is easily avoided by common-sense application of other obvious signs taken in correlation with the blood-pressure data.

FUCHSIN IN THE THREATMENT OF GONORRHEA

In view of the fact that by the time an infection of the urethral mucous membrane with the gonococcus gives rise to subjective and objective symptoms the infectious organisms no longer reside on the surface of the mucosa but have invaded the submucous tissues, the rational treatment calls for a

germicide that is capable of penetrating the tissues and of destroying the germs imbedded therein, but without at the same time injuring the tissues themselves. Of the many substances that have been proposed for this purpose within the last forty years, none has stood the test of time sufficiently that it might be called an ideal antigonococcic remedy.

The idea of utilizing in a therapeutic way some of the agents employed for staining bacteria is not a new one, it having been reasoned quite correctly that the action of the aniline-dyes upon bacteria is a deleterious one, and since it is known that microbes are killed by a sufficiently long exposure to staining fluids. On the basis of this recognized fact, fuchsin in particular has been utilized as a germicide, because most germs take this stain very readily—that is, are "fuchsinophil." It was the knowledge of this that impressed Dr. Victor G. Vecki with the idea that fuchsin must have great possibilities in this direction, and in an interesting article published in *The California State Journal of Medicine* for September last, he relates the practical results of his experimentation.

Using fuchsin cautiously first in various mild and chronic ailments, then gradually extending its use to tedious, painful, and acute inflammatory conditions, Doctor Vecki invariably secured good results, the injections being accompanied by only mild reactions and very slight pain. He found that gonococci, colon-bacilli, and other pathogenic germs disappeared rapidly from the urethra and bladder and that as a rule the discharge ceased after a few applications.

It is of great importance to exercise particular care in preparing the solution of fuchsin for urethral injection, since undissolved particles of the substance will give rise to very disagreeable symptoms. Doctor Vecki believes that isorubin, or new-fuchsin, probably is best for this purpose, because it easily dissolves in water and is free from arsenic.

The author keeps on hand three kinds of solution. For the 1-percent solution, 10 Grams of fuchsin is triturated in a mortar, then 20 Grams of *absolute* alcohol is added, the mass then is carefully stirred, and after fifteen minutes, 980 Grams of distilled water is added. The 1-2-percent and the 1-4-percent solutions are prepared in the same way with proportionately smaller quantities of fuchsin and alcohol. As an excess of precaution, the solution is filtered immediately before being used. It hardly seems necessary to emphasize that everything must be done under strictly aseptic conditions.

Before starting upon a course of the fuchsin-treatment of urethral or bladder infection, the patient should take a sufficient dose of some saline laxative, in order to clean out the intestinal tract thoroughly. Just before making an injection, the patient is ordered to empty his bladder (after, perhaps, a mild prostatic massage, if the prostate gland and seminal vessels are involved in the inflammation), then the urethra is irrigated with sterile warm water. Now a 2-ounce all-glass syringe is filled with the fuchsin-solution, a soft-rubber olive-shaped tip is attached to it, after which injection is proceeded with. Doctor Vecki asserts that the effect of the intravesical injection of fuchsin is increased if the bladder is emptied at once, as is always possible, although most patients at first insist that they can not. Needless to say that not only the patient's clothing but also the floor must be protected against stains.

In acute urethritis, the fuchsin-injections should be made, once, on every third day, gradually increasing the strength of the solution. On the intervening days, the urethra should be irrigated with a warm solution of quinine or some other mild antiseptic. Discharges remaining after the pathogenic germs have disappeared yield very readily to astringent, but mild, injections.

In chronic inflammations of the posterior urethra, in chronic prostatitis and the various forms of cystitis, the fuchsin-injections are best given once a week or once in ten days, and never before all traces of the previous application have disappeared.

The patient should not be discharged as cured until frequently repeated examinations have shown complete absence of pus and bacteria and until all subjective symptoms have disappeared. It is advisable to instruct the patient to present himself for examination once a month three or four times in succession, even after the cure seems to be perfect.

Finally, Doctor Vecki has fully satisfied himself that fuchsin really penetrates into the deeper layers of the mucous membrane and that, consequently, it exerts its germicidal effect where it is called for.

Atropine, formerly used empirically for shock, it now seems, has a scientific basis. It contracts the blood-vessels in the splanchnic area, while dilating those in the peripheral portions.—*Indianapolis Medical Journal.*

Miscellaneous Articles

Chlorine Preparations in Typhoid Fever

IN June of 1912, at which time I was living at Athens, Alabama, my son-in-law, then living in Birmingham, was taken sick and came here to consult me. I concluded that he was suffering from a genuine case of typhoid fever. I cared for him at my home until his full recovery. Immediately upon his and his wife's arrival at my home, I gave his wife an injection of typhoid vaccine, which produced a profound constitutional reaction.

Only six months later (July 20, 1913), I was called to Birmingham to see this married daughter of mine, who was thought to be coming down with typhoid fever, the same as her husband before. When I arrived, the physician in charge informed me that the patient had taken to her bed only three days before. He had given calomel and saline laxatives, and quinine after that; however, the symptoms not being fully developed and because of the fact that I had immunized her only six months previously, he was not certain as to the real nature of the condition.

As no microscopic examinations of the blood had been made, we immediately made a smear and sent it to the city chemist. I was so well satisfied that I had to do with typhoid fever, that I decided to take the patient to my home, where I could treat her. We departed on the next day. She was having a high continued fever, slight tympany, and was mildly delirious at intervals.

I stopped giving quinine. Instead, I gave her, in dram doses, every four hours, and well diluted, the compound salt of chlorine, beginning at 5:00 p. m. on the day of our arrival. At that time, her temperature was 104.5° F., while the next morning (Tuesday, at 7:00 a. m.) it was 103 degrees—surely, a very high morning temperature—but notwithstanding the exhausting trip, her temperature at 2:30 p. m. was down to 102.5° F.; and it never went above this again.

Two days after sending the specimens of the blood to the laboratory, I received the report that both smears were teeming with living typhoid bacilli. On the third day after our arrival here, the patient had one very profuse hemorrhage, something that I naturally had looked for following such high temperature.

She began to improve at once, the appetite returned, the mind quickly became clear, the tympanites subsided, the stools assumed a more natural aspect, the fever promptly gave way, the tongue looked moist and normal; and she passed on to recovery, the temperature receding to normal in nineteen days, instead of the usual twenty-eight.

I have treated a series of thirty cases with this identical remedy, varying the other drugs as indicated, and always with the same splendid result. When the compound solution of chlorine enters the intestines, it being a very unstable preparation, the chlorine is liberated and in its nascent state permeates every tissue of the body, coming in contact with all the microorganisms present, destroying them and rendering their toxins innoxious.

Now, why can we not perfect a hypodermic form of chlorine and inject it intraspinously, where it will come in direct contact with the germs of infantile paralysis, which would at once stop the disease before great harm is done. Then as a preventive means, when that disease invades a given locality, give it by the mouth, and in only a few hours the person's system will be saturated with chlorine gas, which will destroy any form of germ-life.

I combine this solution with an equal amount of elixir lactopeptine, thus rendering it far more pleasant to take, yet, not impairing its germicidal properties; while, besides, the latter aids the digestion of what nourishment the patient takes. Try it, and be convinced.

A. C. WATERS.

Birmingham, Ala.

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[Doctor Waters' experience with a preparation of chlorine is interesting, particularly

in view of the fact that chlorine forms the basis of the new antiseptic preparation paratoluenesodiumsulphochloramide.

For prophylactic and curative purposes, the use of any chlorine preparation against infantile paralysis would, of course, necessitate very careful experimentation before one would be justified in administering it intraspinously, although it is but logical to assume that it might be of value in counteracting the infection. When the dosage of paratoluenesodiumsulphochloramide for internal administration has finally been established, Doctor Waters' idea undoubtedly, will be of service.—ED.]

WILL CURING PYORRHEA PREVENT CATCHING COLD?

A very interesting experience has recently come to our attention, namely that of a southern gentleman who declares that since he was cured of pyorrhea by the emetine injections he has been practically immune from colds.

He now wishes to learn whether this is a common occurrence or whether his case is exceptional.

We herewith put this problem up to our readers. This is the first time we have heard of anything like this; still, we can readily believe that a pus-secreting dental pocket may harbor organisms producing acute colds, exactly the same as a boggy, pus-secreting tonsil brings this about.

We present this matter, without comment, with the request that we may have reports from anyone who has observed a similar result.

THREE CASES OF INFANTILE PARALYSIS IN ONE FAMILY

I have treated three victims of infantile paralysis in one family, and since they were of considerable interest to me they may similarly interest the readers of CLINICAL MEDICINE. These three cases involved the mother, aged 38; a daughter, aged 13; and a son, aged 10.

The mother was taken sick about October 4, 1916, with a temperature of 102 degrees and, as she said, so tired that she couldn't sit up. A doctor was called and pronounced the condition one of summer-grip. She continued in this condition of extreme malaise until I saw her October 10, and then she complained of feeling a little soreness in her right knee. At this time her temperature was 100° F. and the pulse 95. The next day she had paralysis of the quadriceps muscles of the right leg, besides loss of the tactile sense and of the knee-jerk. The latter was diminished in the left leg. After this, her temperature gradually went down and now, December 10, after having used the galvanic current, she can walk with the aid of crutches. Her pulse, temperature, and blood pressure were as follows for three days:

	Temperature	Pulse	Blood Pressure
October 11.....	100° F.	95	95
October 12.....	99° F.	90	100
October 13.....	98° F.	90	110

The next of the family to be taken sick was the daughter, aged 13. She was seized on October 8, with severe headache, vomiting, and pain in left shoulder. When I saw her on October 10, her temperature was 101° F., and the pulse 95, and there was marked stiffness of the neck. The knee-jerks still were present, equal and normal. The pupils were equal and reacted to light and accomodation, There was a slight paralysis of the abdominal muscles, which, by the next day, developed into retention of urine. Her temperature gradually went down until the third day after the paralysis had appeared, when it was normal. She was delirious at times, After being catheterized for five days, she was able to void her urine. After staying in bed for three weeks, her paralysis had entirely disappeared. Now there is not a trace left, except that her shoulder gets tired after exercise. Her chart for three days read as follows:

	Temperature	Pulse	Blood Pressure
October 11.....	101° F.	100	70
October 12.....	99° F.	95	98
October 13.....	98° F.	90	110

The third of the attacked was the 10-year-old son. On October 9 he was taken with severe pain in back of the neck, vomiting, and delirium. The following day, his temperature stood at 103° F., and the pulse ran 140, there was ptosis of the right eyelid, he could not speak plainly (acted as if there were something in his throat) and when I put my hand under his head I could raise his whole body. At this time, there was nothing of any moment in his lungs, there was nothing to be seen in the throat. But, the reflexes were gone. The next day (Oct. 11), his temperature was 102.5° F., the pulse ran 130, he was delirious, the jaws could not be moved, he could not swallow, there was a beginning pneumonia, there was a gurgling in the throat and at one time, in turning him over, some three ounces of pus flowed from

his mouth. At this time, the thoracic muscles were paralyzed, and the state sanitary supervisor who saw him at this time did not think the child would live an hour.

He continued in this condition for forty-eight hours, then gradually began to regain consciousness, and on the fifth day of his sickness was asking for some soup. At this time, he could open his jaws about one-half inch. There was ptosis of the eyelid and some paralysis of one side of the face. The next day he could open his mouth a little wider, and when he put out his tongue it protruded a little to the side. The lung condition cleared up, the stiffness of the back gradually disappeared and all the other symptoms left, until in three weeks' time all that remained noticeable was a slight ptosis of the eyelid and a little paralysis of one side of the face. He was able to get about anywhere when the quarantine was raised at the end of six weeks.

The reader will notice that the boy had all the symptoms that are claimed to lead to a certainly fatal termination, but he got well, for some reason or other. These symptoms are: paralysis of the thoracic muscles and persistence of temperature after the paralysis has developed. His chart for three days read as follows:

	Temperature	Pulse	Blood Pressure
October 11.....	102.5° F.	130	80
October 12.....	102° F.	130	98
October 13.....	100° F.	120	110

The treatment employed was as follows:

Each patient was given calomel in fractional doses, followed by a laxative saline. Aconite was given every hour, by mouth, dosage according to age. A bromide and ergotin were given, to quiet; also potassium iodide was given. Of course, after the first day, the boy could not take any medicine by mouth, so, his treatment consisted of normal saline enemas, given every four hours, in each of which was dissolved 5 grains of potassium iodide. Whether this was of any value or not, I can not say, but, when one sees such a serious condition improve under this treatment, it makes him wonder whether there was not some virtue in it. This was the only treatment, except that the three patients were kept in bed three weeks, and, in the case of the mother, after about six weeks, she had some electrical treatments and this seemed to be of great benefit to her and there seems to be a good chance now for her to regain the use of the affected muscle.

The points about these three cases that impressed me were these: The onset in the mother was marked by extreme malaise, while no paralysis developed for seven days. The children being taken down on the fourth and fifth days, respectively, after their mother. The severe meningeal symptoms as well as those of the thorax in the boy, together with the persistence of the temperature after the paralysis had developed. The paralysis of the bladder in the daughter. Finally, the fact that they all got well.

The role of the potassium iodide I must leave undetermined—possibly it was a case of

> If he win the battle,
> Then they praise the Maker's name.
> If he lose the battle,
> Then the doctor is to blame.

CYRUS W. CULVER.
Lowville, N. Y.

CHILBLAINS

Have the readers of CLINICAL MEDICINE any suggestions to offer for the *successful* treatment of chilblains? This condition remains for many of us one of the most troublesome we have to deal with during the winter months. Who can give us something rational as well as helpful?

THE BABY SURVIVED!

On November 5 last, a warm Sunday morning, at about 11 o'clock, a workman at the electric-light plant of this city, while passing down the nearby alley, heard a faint cry from an outhouse and, investigating, found a crying newborn infant lying in the filth of the pit. The babe, a fine boy weighing eight pounds, when rescued, although thoroughly chilled was very much alive. The cord, it was found, had been severed about eight inches from the navel.

The mother of the child, as has since developed, was a strong, healthy girl 21 years of age. She had been skating the evening before, and went home at about 10 o'clock, going to bed with her sister. As she told later on, labor pains came on shortly after. She stood it as long as she could, then got up and entered the outhouse back of the lot, where the baby was born quite soon. She caught the child in her hands, tore the cord, and threw the baby into the cloaca. After the placenta came, she wiped up what blood there was with waste paper, then went back to bed—her sister and mother remaining in ignorance of her condition as well as of what had taken place. The next day, as well as each day thereafter, she was out on the

street with her sister, and feeling good, as she declared. When eventually accused, she firmly denied all charges, but finally had to confess. Asked, how she could have had the heart to dispose of her little babe in the way she did, she coolly replied, "I was just desperate and hardly knew what I was doing." Can you beat it?

I. W. IRVIN.

Auburn, Nebr.

SANITATION IN RAILWAY CAMPS

Sanitation, the preventative medicine of present progress, has made tremendous strides in the last few years, and where formerly the sanitary official lifted his feeble voice in a plaintively protesting cry against the filthy evils with which he then was surrounded he now walks boldly forth and denounces adverse conditions—and, lo! they are corrected. Let no man think, however, that this great change was accomplished without toil and strife, without endless educative reiteration, without patient, painstaking effort, for all this, and more, had to be undergone before as much as the shadow of a foundation could be discerned. Yet, even today no more than a foundation has been laid; but that foundation is broad and firm and will uphold the superstructure of future years without danger of collapse, for it is cemented together with truth.

It has not been many years ago that laborers for the various railways were herded together like cattle and worked and fed as such, little or no provision being made for their comfort or necessities and none for their welfare. It was alone because of a realization that these workers could give only in proportion as they received that sanitary measures were adopted. The great white goddess sanitation was appealed to, and not in vain, for, today these men are better cared for, better fed, and generally looked after more humanely than ever before.

Nowadays, one sees a contented, cleanly, well-fed crowd of workmen, who are cared for in especially constructed buildings with commodious quarters, well lighted and ventilated, in the summer screened against the pestiferous insects and well warmed in winter. The food supplied is nourishing and plentiful; it is prepared by competent cooks and served in light clean dining-rooms by trained waiters.

The following sanitary regulations, adopted by the Chicago Commissary Company and enforced by their sanitary officials on all the great trunk lines with whom they hold contracts, will give the interested observer an opportunity to see how in part these changes were brought about—the earnest cooperation of the railway companies accomplishing much toward the fulfilment of sanitation in camps, with the systematic inspection by federal, state, county, and municipal sanitary officials completing the circle of efficiency.

The camp-clerk acts as local sanitary inspector, while he, in turn, is supervised by the district camp-inspector, who reports all unsatisfactory conditions to the department of sanitation.

Kitchens and diners are scrubbed daily with hot water containing soap, lye or soda, and after each meal are swept and made neat and clean. The cook has charge, under the clerk, of the kitchen and diners, and he has under his direction an assistant and two to four waiters. The supplies are sent out from Chicago and placed in the store-room and the great ice-box during the short time intervening before being consumed. Diners, kitchen and store-room are screened and kept free from flies. The rooms where the men sleep are ventilated, sprinkled and swept each day, the beds are made up and a disinfectant is sprayed over the entire room. Twice each week the beds, floors, and walls are scrubbed with soap and lye-water, and the blankets and bedding are treated with live steam, to destroy any chance vermin present.

The men are provided with individual soap and towel, while many of the camps have shower-baths. By providing various conveniences, the men are encouraged to attend to personal cleanliness and to change their undergarments. Furthermore, cases of sickness are promptly reported, isolated, and placed under the care of a competent physician.

The surrounding premises are in charge of a yardman, who promptly removes all refuse and attends to the general neatness of the outside surroundings. Chlorinated lime is used freely in and around the privies and in all places where moisture accumulates. The rule against contaminating the soil with excrements is strictly enforced.

A number of other measures are now under consideration, among them the supplying of all camps with first-aid outfits, examination of those employees whose duties require them to handle foodstuffs, recreation and writing-room, besides other measures calculated to increase the health and happiness of the men.

These regulations have been fixed upon as a foundation, and even as this article goes to press, new and valuable measures are being discussed, with a view to still further raising the sanitary standing of these camps. And all this, remember, where but a few short years ago the men were fed anything, anywhere, and allowed to sleep as they pleased, with no attention paid as to whether they bathed, were satisfied or not or were sick or well, so long as their sickness was not of an incapacitating nature.

The method of educating laborers in simple sanitary measures and telling them the whys and wherefores is the ideal one and will certainly come into vogue generally, it being practiced here and there even now with success. This education must be carried on, however, by some patient person who can speak to the masses in their own language, casting aside technicalities and depending on reiteration in different phrases to carry home the point to his auditors. It is a slow process, but once the seed is planted it will grow with amazing rapidity, because one man who has become convinced will talk to his fellows and assure them in his own way, that is understandable by them, of the great help and benefit accruing to them from these rules of sanitation.

S. C. BEACH.

Chicago, Ill.

GENITAL MUTILATION

Doctor Lydston's article, in last December's issue of THE CLINIC, on criminal mutilation of the genitals reminds me of a case of mine of a similar nature which I thought might be worth relating.

A man thirty-five years of age, who had a handsome wife and several nice children, sent for me. Arriving at his home in the woods, I found him with a steel trap clinging to what remained of his scrotum. After some questioning, he told me that he had made an effort to castrate himself with a hatchet while sitting astride of a log. Taking off the trap, I found that a large part of the scrotum and one testicle had been taken off. Being a hunter and trapper, he had placed the cut edges of the scrotum in the jaws of the steel trap in order to stop the flow of blood.

I secured the artery and stitched the cut edges of the scrotum together, but the pressure of the trap had been so strong and protracted that scrotal integument sloughed off until there was only enough of it left to cover a small part of the remaining testicle, which latter was tightly drawn up into the outer opening of the inguinal canal. However, it finally healed over, and his good-looking wife continued to have children just the same as before that little somewhat injudicious incident.

As to the psychology of this case, I cannot say, but think it grew out of jealousy on his part.

W. W. HOUSER.

Lincoln, Ill.

PREGNANCY UNDER DIFFICULTIES

Last August, a married woman came to my office and requested me to remove from the cervical canal, a dilating-stem, which some physician had inserted more than a year before and which had remained in place during all that time. The appliance was found deeply imbedded in the tissues; an unavoidable endocervicitis was revealed, and the neck of the womb was about twice the normal size. The woman had menstruated about five weeks before, thus having passed her regular time by about one week.

A few days after this visit, I was called to her home, when she had all the pathognomonic symptoms of having passed through an early abortion. She had uterine pains and clots of blood had come away; also, she had vomited a "mass of stuff" after experiencing chilly sensations, and a moderate flow of blood had followed. The os uteri was patulous and the cervix soft. I passed a dull curette around and over the entire lining of the uterus and rinsed with a 1-percent solution of chlorazene. Everything looked favorable for an early recovery. However, the patient not getting on as well as I thought she ought to, I again applied the dull curette thoroughly and the same antiseptic solution, when some shreds and débris came away. She seemed much improved, but in the course of eight or ten days came to my office for treatment for her cervicitis and hemorrhoids. Still, from time to time, she had attacks of nausea and retching, while some blood followed by a mucopurulent discharge, sometimes offensive, would come from the womb. I again passed the curette, but brought away only a little blood and some mucus. She complained of uterine tenderness.

I now began giving electrical treatments—Neiswanger's ball uterine electrode, positive pole, pushed well back into the cul-de-sac of Douglas, negative large dispersing electrode over the abdomen and uterus—using a 30 to

50 ma. current every second or third day. I also introduced into the vagina tampons saturated with a mixture of iodine, calendula, hydrastis, hamamelis, and glycerin. This course of treatment was continued for four months and the patient was making some gain, then began to relapse into her former condition—nausea, vomiting, loss of appetite, some back-pains, and tenderness over the uterus—so that at the end of this time she was in no better condition than at the start, while, in addition, the abdomen showed a gradual enlargement. This latter fact she attributed to bloating as the belly was much more prominent at some times than at others.

After another very thorough examination, I informed her that I should be forced to pronounce her pregnant were it not for the fact that seemingly she had had an abortion and I had twice used the rinsing-curette, besides the long course of electrical treatments. As a matter of fact, a few days later I was compelled to diagnose pregnancy, for she certainly was threatened with a miscarriage. And this actually occurred—this fetus had continued to grow for four months while the womb had been subjected to all the attacks described.

In my nearly forty years' experience in the practice of medicine, I never have come across any case similar to this one; nor have I ever heard of any. Now I should like to hear from the readers of CLINICAL MEDICINE, through its columns, whether any of them ever have known of a woman carrying a fetus for four or five months after undergoing such a course of harsh treatment as here detailed. This case baffles me; indeed, it has compelled me to admit that the seeming impossible is possible.

"C."

Wash.

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[This report certainly shows that the pregnant human uterus is capable of sustaining insult and injury to an unbelievable degree. Can any of our readers give its equal? The doctor is to be thanked for his frankness in reporting this case. Few physicians have the courage to tell thus freely of their mistakes of diagnosis; and yet we may often learn more from records like these than from the reports of remarkable cures.—ED.]

TO MODIFY THE KERN-DOREMUS BILL

As many of our readers may know, there now is pending in Congress what is known as the Kern-Doremus Bill, the purpose of which is, to give the postmaster-general the power to make regulations permitting of the sending of poisonous drugs and medicines through the mails.

The readers of CLINICAL MEDICINE need not be told that, as matters now stand, it is illegal to transmit "poisons," so called, through this channel; a condition that is causing great inconvenience to all parties interested—to manufacturers, physicians, veterinarians, and dentists.

The bill referred to is a move in the right direction. Unfortunately, however, it has one serious defect. This was first pointed out by the editor of *The Medical World* and has been emphasized in a letter by Dr. B. G. R. Williams printed in *The World* in its January issue. The defect in question is the failure of the bill to provide for the mailing of pathologic and bacteriologic specimens to laboratories for diagnosis and for such other uses as may be called for.

In view of the growing dependence of the physicians of this country upon laboratories and the necessity for adequate laboratory-service, in order that the physician may be able to do good work, a law of this kind would work great hardship upon the medical profession, as well as upon the ailing people of the country. It would even make illegal the sending by mail of specimens to the laboratories maintained by virtually every state in the Union for the convenience of the medical profession.

We urge all readers of CLINICAL MEDICINE to write to their respective congressmen and senators about this matter. Firmly insist that any legislation of this character shall fully protect the interests of the doctor; for, his work should be made more easy, not more difficult, and our state and national legislatures should cooperate with him in such a way that he may become more efficient. Every agency of the government should keep in mind the value of the service of the physician to the people constituting this nation.

PUSH THE KERN-DOREMUS BILL.—CURATORIA FOR DRUG-ADDICTS

I have read with interest the item appearing in the December number of CLINICAL MEDICINE regarding the Kern-Doremus Bill, which we hope will be passed by Congress at an early date. We country practitioners certainly need some modification to the Harrison Law regarding the sending of

narcotics by mail. The fact that we are prohibited from using the mails for this purpose is working a great hardship for all country physicians, and no less for their patients. I myself do not prescribe any more narcotics than I am actually compelled to do. For that reason, I carry only a very limited supply of these drugs, since we have other drugs, of a nonhabit-forming character, that will act nicely in most cases. But, when we do need morphine, for a patient, nothing else will take its place.

We country doctors certainly must have some way to get medicines of this kind to our patients on rural mail-routes. As it is, we can not send by mail any medicine containing even but 1-8 grain of codeine. For instance, I have a patient who is suffering from a severe cold and cough. Ammonium chloride with 1-25 grain of codeine is an excellent remedy for controlling the cough, but I dare not send to this patient these tablets by mail. It is all wrong, and injustice all around.

I am sure that we can get a law giving us the right to send through the mails medicines containing narcotics. I am sure, also, that no physician who honors his profession and his standing as a man would take advantage of such a law; should anyone do so, then punish him severely. Let every one of us get to work and impress upon our representatives in Congress to do all they can to secure a good safe law, one that will give the physician those privileges that are his by right, and which no rational person begrudges him.

Now just a few words regarding some provision calculated to take care of the drug-addicts that are deprived of the drug by the passage of the Harrison Law. This, in my estimation, is a most important question and should be taken seriously by us all. Hundreds, yes, thousands of men and women, today, who are users of narcotic drugs have been deprived of them and thus subjected to great suffering, and some have been thrown into jail to suffer the tortures of hell and damnation, some have gone insane, still others have died or committed suicide. It depends upon the constitution of the victim whether he can bear the suffering caused by the abrupt deprivation of the drug. He is given no treatment, but is allowed to suffer or die. It is pitiful.

These people should have our sympathy and help, in an attempt to cure them of the habit and to rehabilitate them as normal men and women, with a chance to make good and once more become useful citizens. Every state and territory should have some place in which to care for these victims. Let them be sent to this curatorium, by court proceedings, for a period of time, say, six months, and there receive the proper treatment, by skilled physicians and nurses, to insure a cure. Then they should be given some light work for a while. When finally they are discharged as cured, they will be strong and robust and begin a new life. Some of the states already have provided for such institutions, but there are more that have not.

So, brother physician, get busy with your representative in your Legislature and try to get a bill passed authorizing such an institution to be maintained by the State. Thousands of dollars are being thrown away year after year in every one of the states; then, why not put some of that wasted money to better use, by maintaining an institution to care for those unfortunate drug-victims?

HAROLD SAMPSON.

Lohman, Mont.

THE SERUM TREATMENT OF SKIN DISEASES

Some two or three years ago, announcement was made, in these columns, of a discovery by Dr. William P. Gottheil, of New York, to the effect that any injection of autogenous blood-serum often would cure psoriasis, pruritus, eczema, acne, pimples, hives, and other obstinate affections of the human skin. Since that time, experiments with this autoserum-treatment have been conducted continuously by Professor Gottheil, Dr. Howard Fox, and other dermatologists, and the original views have been greatly extended.

The scaly, itchy eruption known as psoriasis is now treated in this way. While it is not in itself strictly curative of that skin disease, the autoserum constitutes an important adjunct. It cuts down, from weeks to days, the time required by the customary troublesome local treatment and enables the doctor to promise, hone tly, to clear the skin in from two to five days in even the worst and most obstinate examples. Thus says Professor Gottheil. Also, it frequently prevents relapses or postpones them for a very much longer time than usual. Moreover, when relapses do occur, the spots of psoriasis are few and insignificant, and the outbreak is much more amenable to mild salves and ointments.

Where hives persist or boils and pimples continue to return again and again, despite the use of vaccines and other treatment, the

autoserum is worth a trial and may prove a brilliant success.

Autoserum injections, according to Professor Gottheil's observations, are also of some value in refractory cases of acne, pustules, blackheads, pimples, boils, foruncles, eczema, pruritus, and barber's itch; they are ineffective and useless, though, in leprosy, pemphigus, and lichen ruber planus. However, the use of local remedies must accompany such an autoserum course.

The method is very simple to physicians trained in hospitals and laboratories and having experience in the use of instruments of precision. Of course, necessarily some expense is connected with this treatment. With a syringe made for this purpose, about 2 ounces of blood is withdrawn from a vein at the bend of the elbow. All aseptic precautions are taken to exclude the bacteria of the air, skin and dust. The blood drawn is shaken for about fifteen minutes on an electric centrifuge, which separates the red and white corpuscles and clotted fibrin from the serum.

It is this clear straw-colored serum, measuring about one ounce (or half the original amount) that is injected into the arm-veins of the victim of psoriasis, hives or whatever skin disease it may be.

Why the blood removed in this manner and kept outside of the human tissues for half an hour, at the utmost, should hasten the action of the other remedies and speed up the victim's return to health, still remains a medical mystery. Neither Professor Gottheil nor Doctor Fox pretend to explain it on any theory or venture a guess, either allopathic, homeopathic, osteopathic or "apathic." They merely give the facts and frankly differ from the followers of "systems" of medicine by admitting that they do not know.

The fairly complete records of 31 subjects of psoriasis show that this reemployment of the sufferer's own blood, cured them of the symptoms in a remarkably short time under the simultaneous use of regular local treatment. Those few who had relapses had remained free from symptoms for a year and a half or longer, while the spots which then appeared were small and few and amenable to local treatment alone.

L. K. HIRSHFERG.

Baltimore, Md.

THE INDEX

Will every reader of CLINAL MEDICINE who desires a copy of the index for 1916 drop us a line at once? It will be supplied without charge to anyone desiring it. Every subscriber should have a copy.

DEATH OF DR. W. F. RADUE

It is with great regret and with a feeling of personal loss that we announce the death of Dr. W. F. Radue, one of our oldest subscribers and for many years a frequent contributor to the columns of CLINICAL MEDICINE. The home of Doctor Radue was at Union Hill, New Jersey, a short distance from New York. He had a large practice and gave special attention to the diseases of children. A little book upon this subject written by him was published by The Abbott Press several years ago and enjoyed a deserved popularity.

Doctor Radue was an able practitioner, a close thinker, and an enthusiast about active-principle medication. Personally, he was a fine, generous-hearted man. We greatly feel his loss, and in this, we know, we are joined by thousands of old readers of CLINICAL MEDICINE.

THRILLS

THRILLS—By C. F. Whiteshield, Powers, Mich.

Now, maybe, Barney Oldfield, in his monster racing-car,
Can chase the shivers up and down your back,
For, he's a regular hellion and he doesn't give a cuss

Dr. C. F. Whitesfield, Powers, Mich.

How fast he goes while burning up the track.
And I'll bet that Captain Koenig could add a thrill or two
If 'neath the ocean in his ship you'd go.
But, if it is thrills you're looking for, hit upper Michigan
And travel with some doctor in the snow

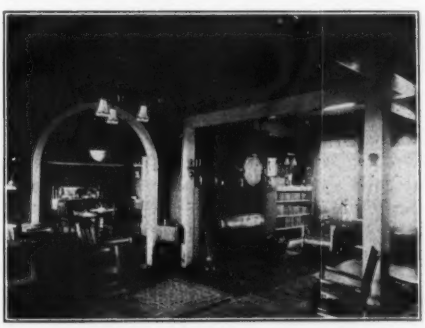
To get a little shiver, you have watched them loop
the loop,
And seen the nimble parachuter jump,
You've tackled bummy movies that's continued for
a year,
And navigated on a camel's hump;
Just watch some country doctor while he makes a
midnight call—
He tunes his car up ready for to go.
There's three feet of "the beautiful" upon the level
ground:
You should travel with some doctor in the snow.

There's a lot of silly cusses every year that climb
the Alps,
They're only looking for a little thrill;
They like to say they have been across—I've often
heard them blow.
I have also heard them kick about the bill.
But, see the country doctor as he's sliding through
the slush,
He barely stops till in the house he'll go.
And after a while he thrills the father with a pair of
twins.
You should travel with some doctor in the snow.

You've heard of monkey dinners given by the
newly rich,
While sons of theirs were chasing actorine,
But, if you're with the doctor as he just avoids the
ditch,
The thrills you have will come from nothing mean.
There's a tightening of your throat as the doctor
rushes in
And finds a babe with croup about to go.
In an hour he is smiling as he says, "Your boy will
live."
You should travel with a doctor in the snow.

SOME MORE PICTURES OF DOCTORS AND THEIR HOMES

Several years ago, we made quite a feature of doctors' homes and offices. Latterly we have not given special attention to this feature, but it occurs to us that not unlikely some of our readers would like to know how "the other half lives." Therefore, we have prepared to print a few pictures of this nature every month, or every other month, if our friends are sufficiently interested to send them in to us.



Interior of Dr. Barclay's Home

In this issue, we present two pictures showing the home and office of Dr. Alexander Barclay, of Cloquet, Minnesota. The first picture shows an interior view of the Doctor's living-room and dining-room; while the second represents a corner of his office, which adjoins his home. I am sure you will all agree with me that Doctor Barclay has a mighty attractive and exceedingly convenient place. The office certainly looks businesslike.

A Corner of Dr. Barclay's Office

On another page, we show a picture of Dr. C. F. Whiteshield, of Powers, Michigan, standing beside his car, which is kept busy in winter as well as in summer, as you can very readily see. Doctor Whiteshield is the author of a poem appearing on the preceeding page.

BURNS—WHO CAN HELP?

Of late, I have become interested in the treatment of scalds and burns and now want to urge the readers of CLINICAL MEDICINE to try the procedure here described in burns in which the cuticle is broken, and then kindly to write me as to the results obtained.

In 8 ounces of clean water dissolve one heaping teaspoonful of chlorazene powder. Then saturate gauze with this solution, apply it snugly to the burned surfaces, and let it remain for probably one hour before applying your dressing.

I also should appreciate if you would tell me briefly your line of treatment for burns in general, also stating what you have found done to burns before your arrival that was not good practice. As a rule, burns receive the worst treatment of any class of wounds,

at the hands of the laity, before the doctor gets the patient in his care, in the attempt to alleviate the pain.

I am working as surgeon at the mines of the Strawn Coal Co., and will state that our burns are from gas explosions. The miner digs with the upper part of the body bare, the gas accumulates and floats on top of the air and if not fanned out it will ignite from the head-lamp and explode. The expert miner will fall to the mine floor when this occurs and very often escape unhurt, but the men get careless and thoughtless (their mind being on the work) and, therefore, very often get "caught" in the flash.

The burn usually kills the epithelial coat of the skin which peals off very readily. I have a Mexican now who was burned on the back (he "fell" but got caught) over a surface of about 200 square inches, covering both shoulders. All the epidermis came off on the fourth day and left the surface very red and inflamed, exuding serum.

I did not apply chlorazene at that time. On the sixth day the serum had changed into a seropus which was still "weeping" at a great rate. I took a piece of thin gauze and tied some chlorazene in it and very lightly dusted this all over the surface. He complained of a little pain for about one minute only. Then I took one thickness of gauze dipped it in boiling water, wrung it out, and laid it over the entire surface, fastening it with one more thickness of gauze, thereby saving material. There was no other dressing. I saw the man two days afterwards. The entire surface was perfectly dry, gauze was not stuck, there was absolutely no pain, and apparently no inflammation. I believe this wound will heal by first intention without the aid of the "laudable pus" that Prof. E. Younkin used to tell us so much about years ago.

T. H. STANDLEE.

Lyra, Texas.

[The chlorazene seems to work beautifully in the treatment of burns, but instead of using a solution of indefinite strength we suggest the employment of a 1 percent solution, which can be made up quickly with the tablets or by dissolving the content of the No. 1 hospital package in a gallon of water. A preparation of chlorazene that promises to be of special value in the treatment of burns is a surgical cream, made up in a sodium stearate base and carrying 0.7 percent of the chlorazene. This has only recently been placed upon the market but it is already meeting with favor.

We shall be very glad to have a symposium on burns, as suggested by Doctor Standlee. Everyone is invited to contribute.—ED.]

FEDERAL RESPONSIBILITY IN THE ANTI-NARCOTIC DRUG-PROBLEM

Mr. Charles B. Towns, of New York, who is well known to our readers as an authority on narcotic-drug legislation, as well as an expert in the treatment of these habituations, has sent us a copy of his pamphlet entitled "Federal Responsibility in the Solution of the Habit-Forming Drug-Problem." Mr. Towns is the author of the Boylan Law of New York State, which was the first of this class of legislation, having been enacted prior to the passage of the federal, socalled Harrison law. In this pamphlet, Mr. Towns says:

"The Boylan Law, as originally drawn, had to submit to some very unfortunate amendments, to avoid losing the bill entirely, because neither the physician nor the druggist of the state at that time realized the necessity of such drastic narcotic legislation. But now it is found that the very features that were eliminated at that time from the original Boylan bill are absolutely imperative to overcome and avoid certain abuses possible under the present law. Practically all that is required to correct these abuses in the state of New York is, to restore the Boylan act to its original condition and pass it."

As among the causes of the growth of the drug-evil, Mr. Towns pays special attention to the medical profession and the drug trade. He also asserts that the extent to which the use of the socalled "patents and proprietaries" is responsible for drug-habituation is not well understood. The cocaine habit, he also declares, grew principally out of the use of socalled catarrh cures. Furthermore, while heroin is perhaps the most dangerous of all narcotics, since it has about three times the narcotic strength of morphine, the spread of the heroin-habit, like that of cocaine-habituation, has largely evolved from preparations containing minute amounts of heroin.

Mr. Towns also says that drug-habits have grown out of the taking of diarrhea-mixtures containing small quantities of opiates. He tells an interesting story about a confirmed opium-habitué in a Connecticut village who, when becoming distressed through the operation of the Harrison Law, was informed by the druggist that she could get the desired effect from paregoric. Finding the result satisfactory, the woman bought all the

paregoric the druggist in town would sell her, this amounting to 8 gallons.

Mr. Towns is of the opinion that the basic way to deal with this question of supply of narcotics would be, to restrict the use of opium solely to its crude form and the galenics made from it. To quote his own language:

"The only way to meet such a habit-forming drug condition is, I repeat, to restrict the manufacture, sale, prescribing, and administering of opiates to the crude opium, to laudanum, and to paregoric, and then to hold the physician to a strict accounting of all of these he personally prescribes or administers. There are no physical conditions in which heroin or any other narcotic is indicated but what could be met by these. We can dispense even with morphine and all of the opium alkaloids. I can go back to the time in the South when there was an old rosewood medicine-chest with a ball of opium and a vial of paregoric, and these easily met every possible need where opiates were considered necessary to alleviate pain. The medical profession would not be inconvenienced in the slightest degree by such a restriction, and it would at once eliminate every unfavorable hazard that has grown out of the use of habit-forming drugs for medical purposes."

Mr. Towns also believes in restricting the use of the hypodermic syringe. If an opiate must be given, he contends, it should be given in disguised form; for, when the hypodermic syringe is used, the patient immediately infers the nature of the remedy thus administered to him. For the same reason, nurses should not be allowed to own hypodermic outfits, while the sale of hypodermic syringes and needles should be restricted to purchases upon physicians' prescriptions.

Mr. Towns also believes in more and more restriction of the sale of narcotics, as expressed in the following:

"Our own country and the whole world would be better off without such drugs. It would be better for people to suffer untold agonies temporarily than to become afflicted with the drug-habit. Those who must have the drug to alleviate the pain caused by permanent illness or injury, who must practically live on it, would, in the end, be much better off dead than to live and suffer—to live and experience the harmful conditions that grow out of the constant use of opiates. In the end, their relatives, friends, and others would rather such people were dead than to have to deal with them as drug-addicts. Considering the few human beings who are now taking the drug for the reason last stated and considering the great army of drug-victims the illicit traffic in such drugs has created, it is a fair question whether the alleviation of pain for the few is worth the awful price paid for it by the curse to the many. My findings have shown that not more than 10 percent of those afflicted with the drug-habit are entitled to use it continuously because of physical disability. This means that we are sacrificing 90 percent of those who could be well and normal without the drug to alleviate the suffering of some few incurable persons."

As to Mr. Towns's method of dealing with this problem, the following two paragraphs give the key:

"What is needed to correct this situation is, first, to create conditions that will avert any unnecessary crop of drug-users, pending the pushing of this work to the international agreement, which is the logical conclusion. There are two things we can do now. One of these is, to restrict the medical practitioner in prescribing and administering these drugs; the other is, to impose the heaviest penalty possible upon illicit drug traffic. The man who knowingly creates a drug-habit should be put in the same class with the murderer, or worse. Twenty years at hard labor should be the minimum penalty. I should like, personally, to see the same treatment meted out to such coldblooded beings in the United States as would be meted out to them in China: make the punishment capital! A few heads would put an end to this damnable business—and the heads would be heads we could easily do without.

"As this problem of provision for those afflicted with the habit is the greatest single problem to be considered in disposing of this matter, I suggest that the federal government, through whatever clinical means it may deem necessary, establish some method of medical and social dealing with the drug-takers, and that it publish these clinical findings in comprehensive detail; that the government establish as a class of drug-takers those who are in need of remedial treatment for a drug-habit, but who have no means to pay for definite medical treatment; that the government go as far as it can toward helping such patients and also that it bring pressure to bear upon the state authorities to assume responsibility for the treatment of drug-cases; that in the case of the confirmed drug-takers who must have the drug, for the reason of some permanent condition demanding its use, the government see that these individuals are legally identified and

then see to it that they are 'franked,' i. e., provided, free of expense, with prescriptions for the amount of drugs they properly should have."

In addition, the necessity for international control of the sale of opium is advised, while an amendment to the law, as proposed by the commissioner of internal revenue, which provides for a stamp-tax on all the narcotic drugs, is endorsed by Mr. Towns.

We regret that we lack space to go further into details relative to Mr. Towns's suggestions. They certainly are worthy of very careful study, although it is our opinion that the medical profession generally will object strenuously to additional restriction upon its freedom of action. Nor do we believe that it will willingly consent to the curtailment of its power of selection of drugs. The suggestion made by Mr. Towns, that the use of narcotics be restricted to opium and official preparations prepared from it, that is, laudanum and paregoric, will seem to most of us like a step backward. In truth, we hardly know as yet what benefit or how great benefit has followed or will follow the administration of the federal and state antinarcotic laws now in force.

We all want careful, thoughtful legislation in this matter. None of us should demand hasty, ill-advised and poorly digested legislation, laws based upon the experience of but one man or even a small group of men.

The problem is a large and portentious one, and it should be carefully considered and scrutinized from every angle—the angle of the physician, the one who is called upon to give relief; the angle of the drug-habitué; the angle of the state, the community at large.

One suggestion of Mr. Towns's, however, we earnestly endorse, and that is, that the federal government be empowered to make a thorough investigation of this problem of narcotic drug-habituation. This would furnish the best basis for further legislation, and, until we have something of this kind as a foundation for our legislative building, it is wise to go slow.

ANOTHER CASE OF HYSTERIA AND UNIQUE CURE

In the last year of my medical-college work, I lived in a neighborhood where there were a good many young people of fine character, excellent habits, and who generally exhibited good, sound sense. Most of them were employed in the trades or merchandising, some were students or teachers, and among them there were some exceptionally pretty girls and several handsome men. I frequently spent an evening with a group in social gatherings at their different homes.

One of the pretty girls had a most beautiful head of hair, and of this she was very proud and always kept it dressed so as to show to the greatest advantage. She was engaged to a fine young fellow of sterling character, but who, in spite of his great love for the girl, had the good sense never to allow her whims to control his manners, particularly his courteous attentions to other young women in their circle of acquaintances.

I had been told of this young woman having had sudden attacks of unconsciousness while at some of these parties, yet, she never appeared to me as one having poor health. Later, one evening, after I had been in actual practice for some time, I made one of a jolly company in the home of our hero, and there noticed certain little signs of jealousy on Ella's part whenever Bob (their names) ceased paying his entire attention to her. After a part of the young folks had left for their homes, Ella was suddenly taken ill and became unconscious. I was called from the front part of the house and found her lying on a sofa, at full length, with stiffened body, eyes rolled upward, slow breathing, and pale and perspiring.

Seemingly she was unconscious of the real agony being suffered by her sweetheart, sister, and friends, produced by this action of hers. I took plenty of time in making my diagnosis; then, while some were leaving the room at my request, I whispered to her that if she didn't waken when I told her to do so after I had given some medicine, I should tell Bob, and her parents, too, the cause of these attacks. The effect of this warning and threat was plainly noticeable.

While anxious friends continued chafing her wrists and ankles and applying smelling-salts, I prepared a hypodermic of boiled water and injected that. I then gave the word, whereupon she opened her eyes, and in a short time was able to leave for her home. Bob's encircling arm wholly removed her weakness. The next attack was a prolonged one, because the elderly physician who was called out of his bed to attend her only looked at her, asked a few questions, accepted his fee and left in disgust, without giving any medicine and but scant advice. The following day, Bob called on me and wanted my opinion and advice. I elicited a history of their "lover's quarrels" and the invariable

result. He was willing to cooperate in the treatment, and a plan was agreed upon.

The telephone wakened me at near 12 o'clock on a cold winter's night; Bob was asking me to hurry to Ella's home, at the same time promising to carry out his part in our plan of treatment agreed upon. Two young women of the company there that evening had come without escorts. Bob offered to see them to their homes and return, and to this Ella objected. When he returned, Ella was indulging in another serious "spell." Bob then asked the girl's father to go with him to a nearby telephone, from where he might call me, and on the way related the opinion I had given and the harmless treatment we had planned. And to this the father consented.

I found the mother and sisters crying and the friends still there, excited, and wanting something done and nothing lacking to make this a typical case. I could discover nothing on which to change my diagnosis, managed to repeat my former warning, then asked to speak in private with the parents and Bob. They willingly consented to accept whatever was done as being the "bluff" at treatment, and hoped for a cure.

As I had guessed, and had warned them, the girl stubbornly refused to waken after the hypodermic had had time to be effective. (Plain water.) A few more efforts to arouse her proved useless. Then, making sure that she would hear me, I told the family it was my opinion that we should have to cut off her hair in order to prevent any future attacks. Quite a discussion followed my surprising statement, but the father soon said, "All right, doctor, go ahead," and the mother, when I asked for them, handed me her best pair of shears.

But, just as the cold steel of one blade was sliding under the girl's beautiful braids, I received a smarting slap in the face, followed by the ejaculation, "I guess you won't!" The surprise, chagrin, and indignation produced by this outcome enabled me to make a clear getaway. I had disappeared by the time those present had sufficiently recovered to think of me.

The resulting humiliation and anger of the parents provoked the father to an old-fashioned application of the razor-strop, in spite of the girl's protestations and her twenty years. (This information was imparted to me by one who was present at the scene of these a posteriori activities.)

Well, she didn't lose her young man; though for a long time he was in doubt. Either, he wavered in his affection or purposely curbed his expressions of devotion, in order to test the permanency of the "cure." Neither did she lose her beautiful hair, but she did lose her "habit." Even the trials, vexations, and disappointments in their married life of several years' duration have not prompted its rediscovery.

W. F. SCHRADER.

SODIUM CACODYLATE VERSUS SALVARSAN

The many reports of arsenical poisoning, being reported from the use of recent importations of salvarsan, should at once stir the profession sufficiently to demand of our national lawmakers, new laws that will now and for all times correct such grievous errors, as granting control of any article, product, drug, food or necessity to any one firm or individual.

Unfortunately for suffering humanity, there is much fear and prejudice against all of the organic arsenic preparations, when in fact I think we have as yet no cases of arsenical poisoning on record from the uses of sodium cacodylate in large doses (up to 45 grains—3 Grams). After several years' continuous use of the cacodylate in large doses, I am convinced that it is not only safer than but superior to salvarsan, the results are not so spectacular, but they are quite as sure and permanent.

Scott Runnels, of Little Rock, in an article in *The New York Medical Record* for November 26, 1910, says that even in those who present some contraindications one will find sodium cacodylate a safer drug than dioxydiamidoarsenobenzol, as from all reports there are not more than three or four cases of serious effects from the use of the pure drug.

I do not agree with the Doctor in that 0.3 Grams per kilo of body-weight is the maximum for safety, though this dose is often sufficient; yet if response to this dose is not obtained we should continue to increase the dose until results are manifest. In all syphilitic cases in primary and secondary stages, I use mercury in conjunction and in tertiary cases iodine. The entire dose of sodium cacodylate is dissolved in the blood, whereas a large percentage of salvarsan remains unabsorbed and difficult of elimination. Ten seconds after beginning the intravenous administration of the cacodylate you can detect the garlicky odor in the breath.

The arsenic content of salvarsan should be 34 percent, while the sodium cacodylate

carries 46.8 percent, hence the remedy should be at least 1-3 more efficacious.

I am satisfied that, if the profession would take up the use of the cacodylate and apply it intelligently and fearlessly, there would be quite as satisfactory and as permanent results as from salvarsan.

Another advantage of the cacodylates is their safety of administration to office patients, due to freedom from unpleasant reactions.

W. N. FOWLER.

Kalamazoo, Mich.

EASING CHILDBIRTH, ALSO, UTAH VERSUS HONDURAS

I wish to offer a few comments on some of the articles appearing in the December issue of CLINICAL MEDICINE—which, by the way, was a splendid number.

Obstetrics has always been to me an interesting branch of medicine, and if there ever is anything in the journals relating to this branch I am always sure to read that first, as I am anxious to get a hold of anything that will help out the mothers and make childbirth easier for them. However, I supposed that everyone knew about the effect of glonoin in parturition, referred to on page 1033. I, myself, have used this labor-promoting agent for years and it has always acted just as Doctor L. says. There is no question about its doing the work, and doing it right; still, I have not used it for a long time, for reasons which I will explain.

I hold that, when a physician is called to a confinement-case, it is his business—and not only his business but his duty—to "get busy," and to get that mother out of her suffering just as quickly as he can. If this is "meddlesome" midwifery, then I plead guilty. To illustrate:

Only a few days ago, I was called to see a lady who had been in labor for two days—not severe labor, you understand, but in the first stage. The pains were not hard, neither had they done much good; the os was of about the size of a silver dollar and flabby as a dishrag. The woman did not think she was in labor, because the pains were not hard enough. Now, here was a case in which glonoin would have worked wonders, but I did not use it. Instead, I gave her 1-30 grain of strychnine, put her to bed and got busy. In a short time I had those pains popping, and we were through with the job in an hour and a half. I could not have finished the thing as soon had I not given the strychnine. Call it meddlesome, if you will; but, I say, "get busy," that is what you are there for. By doing this, you will be released so much sooner and your women are grateful for this kindly service.

I find that by manipulating the os you accomplish two things; namely: you stimulate the labor-pains, you can make them set in whenever you want them to, and you dilate the os, thereby making things move faster. I not only make all the examinations that I feel are necessary, but I stay right there and work.

Often, though, in the first stage, when the pains are hard and the os is dilating too slowly and is rigid like an iron ring, I give half a tablet of H-M-C or a hot sitz-bath; also, I place pledgets of cotton soaked in hot olive-oil against the os. Sometimes I give macrotoid, that is, when the pains are nagging and not regular or not accomplishing anything. Altogether, though, I prefer to manipulate the os with my hands.

A year or so ago, I read an article, from the pen of an Oregon physician, about how easy calcium fluoride and potassium phosphate would make confinements. Well, I laid in a supply and began using the treatment. I recall two primiparas who got this treatment during four months before being confined. If that did any good, I sure was unable to discover it, since both were instrumental deliveries.

Right here I want to say that I was using H-M-C before I ever heard of the "Freiburg clinic." When all this hullabaloo was going on in some of the eastern lay magazines about the socalled twilight sleep, I wrote an article condemning its use, on the ground that in the hands of the unskilled it is dangerous. I also said that many monuments would be erected in America to the memory of mothers who had sacrificed their lives to this socalled twilight sleep, or, I might better say, to the unskilled use of these drugs. I am sorry to say that my prediction is coming true. The first American mother to go to the Freiburg clinic has latterly lost her life, in New York, under this medication. I have heard of two other deaths closer to home. I do not condemn this practice absolutely, but I do say—be careful.

I might add that my article was not published, it was not the kind the publishers wanted. They wanted articles from men of national repute, men who would help them in their propaganda, and from lay women who knew absolutely nothing about medicine or the effects of drugs, and who presume to give advice to prospective mothers

I say, the many American mothers who give their lives to this method of rendering delivery painless, the lay magazines, all those who, not knowing, presumed to know, all those instrumental in foisting this procedure on American mothers, urging them to insist that their family physician must use it, all these people I say, are responsible for the lives that have been lost in the past and yet will be lost in years to come. "Fools rush in where angels fear to tread." Have I put it too strongly?

With increasing surprise, I have read another letter from Doctor Hollmann, from somewhere down in Central America. I ay, surprise, because, why a physician should want to invest his money a way down there so far away from home, when he can do better right her in God's own country, gets me. There are better, and safer opportunities at home, and with none of the risks.

Why not get into a country where the soil is unsurpassed and the climate right for growing all kinds of crops, a country that is developing and has a future, with markets close and railroad service to get you to those markets in a few hours? If you do this, you will make money, and never lose a dollar on your investment.

The state of Utah is coming to the front as an agricultural community and is developing fast, and I know of a county in the state that is growing rapidly, where the soil is unsurpassed, the climate ideal, and land values are increasing. This land can be bought now at $15.00 and $25.00 per acre, sandy loam soil. This land is going to double and treble in value in the next few years.

If you are interested in land, consider Utah.

W. B. SECREST.

Logan, Utah.

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[A good deal depends on what the doctor means by "twilight sleep." If he wishes to convey the thought that the use of hyoscine and morphine, or similar combinations, under any conditions and in any way, is dangerous, then we must say frankly that we cannot follow him, for we *know* that properly used such a sedative combination has given the very happiest results in the hands of thousands of physicians, few of whom will be inclined to abandon the method because of the hue and cry against those who have had the temerity to use and recommend it in the great crisis of woman's life. The danger is not from the method—it is from the abuse of the method. The drugs are powerful and must be used with intelligence, and in properly selected cases. But isn't that true of the use of all potent drugs?

Land again? What an appetite we have for the land. But we must warn you that there is just about as much danger of speculation in real estate as there is in stocks. Whatever you buy—*investigate first.* Otherwise you are likely to find that you have bought in haste to repent at leisure.—ED.]

"HEALTH SERVICE"

Among the most notable developments of modern medicine, is a movement that is finding a constantly increasing number of adherents, namely, the application of medical knowledge to the prevention of disease. Some years ago, the Life Extension Institute was established, under the most favorable auspices, for the purpose of supplying to its subscribers a "health service" through which they receive, periodically, a complete physical examination, for the purpose of discovering at the earliest possible date, any departure from the normal, so that they may take steps toward restoring the normal functioning of the body and, thereby, prevent degeneration and disease.

It goes without saying that such a service must be of value more particularly for the early diagnosis and treatment of diseases that eventually lead to degenerative processes of the organs involved, processes that, essentially, are chronic in nature. They are diseases that are prone to affect persons in middle life and later, and include, for instance, chronic affections of the kidneys and of the circulatory organs.

For some years, life-insurance companies have extended their policies in the deliberate attempt to assure and conserve the health of their policyholders. The fact that this manifestly is a question of good business rather than an eleemosynary proceeding does not make it any less valuable. The results evidently accrue to the advantage of both, the companies and their policyholders.

We are informed that the Life Extension Institute has made arrangements for a health-service. Under this service, each entering policyholder receives a review of his condition from the standpoint of personal hygiene. The facts in his medical report and application are reviewed by the Institute, and he is told of his status as a risk and of what he can do to improve his condition and prolong his life.

The Germania Life Insurance Company and the Postal Life Insurance Company have

taken this service, thus marking a new epoch in health conservation as applied to life-insurance policyholders. This service is not, of course, compulsory to the policyholders, but they receive this hygienic review of their condition upon request preferred to their company. It goes without saying that this policy of the life-insurance companies is a very commendable one, and it may be accepted with full confidence that it will be appreciated by their clients.

THE RAPID ADVANCE IN ANTISEPTIC PRACTICE

In all the various branches of medicine and surgery, none have made such a rapid advancement as that of antiseptic practice. The fear of suppuration and infection, with their direful consequences, does not stay the hand of the surgeon as it once did. Under antiseptic precautions, every part of the body is now opened and explored, with little fear of anything but good resulting. It is shown, without a possibility of contradiction, that at least ninety percent of the most skilled surgeons of today recognize the value of modern antiseptic methods of operating and of treating wounds. The remainder, it is aid, practice it in part, but are not as thoroughly impressed by its value as are the rest.

When we come to consider the array of statistics in favor of antiseptics, we can arrive at but one conclusion, namely, that by this means nowadays thousands of lives are being saved every year, which would have been sacrificed under the old nonantiseptic plan. Every conscientious surgeon now feels it his duty toward humanity to prevent by every means in his power, access of germs to any wound, and so thoroughly has this knowledge of the value of antiseptics become grounded in the minds of the public that the surgeon who would ignore their use in a case of major surgery would lay himself liable to a suit for malpractice should the outcome be unfavorable. It no longer is a matter of choice, but is incumbent upon him to use such antiseptics as he believes will best safeguard his patient, or he must expect to bear the stigma that follows failure.

The thoughtful surgeon now recognizes that the slightest carelessness on his part, or the omission of any part of the antiseptic technic may be followed by irremedial mischief, that may result in undue suffering to his patient or may cost his life. It would, at this age of advanced surgery, be hard for the physician to deny successfully that his methods of treatment do not determine the outcome of a flesh wound or that infection and suppuration are not due to his carelessness in the use of antiseptics, either by omission or commission.

We now know that the touch of the surgeon's hands or instruments (after they have been thoroughly sterilized) against a nonsterilized object, such as one's own body or clothing, may change the outcome of the whole operation and seriously endanger the life of the patient.

The introduction of a very few of certain kinds of pathogenic germs into the wound will produce just as fatal results as if thousands had entered, because of the remarkable fecundity of these low forms of microbic life; how a very few solitary germs introduced into a wound or the peritoneal cavity will, in a short time, multiply into many thousands, yes, many millions, and, as they multiply in number, their poisonous toxins increase in like proportion.

It is, therefore, an undeniable fact that the surgeon must guard every step of the operation by being thoroughly aseptic, if absolute success is to crown his efforts. The site of the operation, the instruments, the hands of the surgeon and his assistants must be made aseptic with some good antiseptic; so, also, the subsequent dressings of the wound, if the best results are to be secured.

All this is fact, not theory. Then, the only question for the surgeon to decide is, what product is the most decided germ destroyer and at the same time is the least caustic to the tissues, and is nontoxic or -poisonous if absorbed, by the tissues, into the general system.

There is, certainly, a long list to select from; it includes over one-hundred products that are said to inhibit the growth of bacilli or kill them; but, the majority of these are worthless, when it comes to their everyday application as antiseptics, while others are too caustic or too toxic to be used with safety.

The list, therefore, narrows down to one that is rather easy to select from. This includes the phenol group, (as, carbolic acid), bichloride of mercury, the iodines, and permanganate of potassium, besides a few others.

Within the last year, a new product has come into prominence, namely, chlorazene, discovered by Dr. H. D. Dakin, of France. From what I have been able to gather, from its use in the military hospitals of Europe, as well as from my own personal experience with it in active practice, I believe that in this

agent we possess the most useful antiseptic so far known to the medical profession.

While my experience with this new antiseptic has not been extensive, yet, I have used it in deep tuberculous abscesses and in two cases of puerperal septicemia, one of them grave in character, besides in many minor conditions, in all with the most gratifying results. I believe that no physician or surgeon can make a selection that will give him better results than chlorazene and that at the same time will be free from byeffects.

C. W. CANAN.

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REPORTING OF DISEASE TO HEALTH OFFICERS

The advanced officials of the Health Bureau of the United States are advocating that a law be passed by each state that shall compel the reporting of all cases of sickness to the central office.

It is stated, on the authority of Prof. Irving Fisher, of Yale, that about 3,000,000 people are seriously ill at any one time, and about half of them from preventable causes; while the economic loss from such illness is no less than $500,000,000 in wages annually, besides as much more for doctors' fees, drugs and medical accessories.

To prevent much of this sickness and loss, it is proposed to have every case of sickness reported to the health-officer of each registration district and by the attending physician; or, when no physician is called, the head of the household or hotel must make the report.

In the following, I wish to present to the readers of CLINICAL MEDICINE a comprehensive system of reporting all the sickness in the country to the Bureau of Health of the United States:

1. Have a uniform law passed by every state in the Union, with the following provisons, to be strictly enforced, under penalty of all concerned.

2. Divide each county in all the states into small districts, according to the population and contour of the land, and provide a registrar.

3. Register every man, woman, and child in each district, recording date and place of birth, occupation, physical condition, and appearance for identification, social relations, habits of living, and state of health generally throughout the individual's life.

4. Each district registrar to forward to the county registrar a report of every person living in his district, as obtained under Section 3. The county registrar to compile all the names of the various districts in a proper way, and to forward a full list of all the county population to the state registrar, which latter shall have every person in the state recorded in a proper book, for the use of the national registrar, who shall be appointed by the President of the United States. Thus, in due time, the Health Bureau of the United States will have an exact record of the name, age, physical condition, social condition, occupation, and data for identification. Then, as births and deaths occur, they can be checked up exactly as they happen.

5. No one will be permitted to move from one place to another without a permit from the registrar of the district from which he moves to the registrar of the district to which he moves. If one goes without this permit, he shall be liable to arrest and imprisonment.

6. Every physician, householder, and head of a family or hotel must report to the registrar every case of illness that prevents anyone from attending to his ordinary business or work for one day. The cause of the sickness, the cost of the treatment, the loss of wages or income, and the condition of the person after recovery are to be reported.

7. All serious cases must be seen by the health-officer in presence of the attending physician, and a full report made to the local registrar. In case of venereal diseases, criminal abortions, and illegitimate children, a confidential report must be made by the health-officer to the county registrar, who in turn must report to the national registrar.

With such a law as thus outlined and enforced, what a mass of valuable statistics there would be obtained in a few years.

Tab could be kept on every individual in the country. All crooks, degenerates, and hobos could be kept under surveillance and none could move on without a pass-permit from the registrar of their last domicile. Travelers would have a pass-permit that would have to be shown to any officer of any town or county authorized to keep tab on all strangers in their district.

With such a law, there would be no need of taking the census every ten years, for all the people would be registered all the time, and the births and deaths added to and subtracted from the whole would give the whole number at any given period. Only those who leave the country would have to be subtracted from the last number.

THOS. W. MUSGROVE.

Sultan, Wash.

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A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

IN 1904, when Dr. A. T. Schofield published his "Unconscious Therapeutics," the mental therapeutical relations between doctor and patient had been given so little thought by the rank-and-file physician, and so much absurd thought (or alleged thought) by quacks and fantastic "mental healers," that the subject was in evil repute with the profession—so much so, in fact, that our author approached his theme with an attitude that might be described as almost that of fear and trembling; indeed, he went to exhaustive lengths to prove, largely by quotations from eminent medical authorities, that there is a basis of truth, yes, of great truth, in the assertion of mindhealers that mind controls matter, even to the extent of healing the diseased body. He pointed out that, if more attention had been directed to this subject by intelligent and competent physicians, there would have been less opportunity for charlatans to impose upon the credulous their ignorant theories; and no better proof of the fundamental wisdom of Schofield's statement could be given than the alacrity with which it was accepted and the consequences were drawn by the medical profession.

Today, the question is not, "Is there such a power of the physician's mind over the patient's body?" but rather, "What is its nature and how may I best acquire it?"

"Not a thought," says Doctor Moore, "not an idea, not an act of will, not an affection or a feeling of the mind can be excited without positive change in the brain, and thence in the blood and the secretions; for, every variation in the state of the whole or any portion of the nervous system is, of course, accompanied by a corresponding change in those organs and functions which it furnishes with energy; so that the mind and the body are in a constant course of action and reaction on each other as long as life and consciousness continue."

From the field of physiology comes our primary conception of how a thought affects the body. It has been proved by irrefutable experience that a force, whether of thought or matter, entering the body always encounters, more or less resistance, and, if strong, overcomes the same. By the law of inertia, matter thus subjected to a forceful influence tends to remain in that state of decreased resistance which it has been made to assume, and, accordingly, the line of action of the force will present a line of diminished opposition to any similarly acting force exerted upon it; and thus what we call a habit is established, whether of mind or of body. What at first we thought or did by conscious effort we now do mechanically, with little or no effort.

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It is self-evident that all the changes directly arising from the countless thoughts that enter the body can not take place without in some way, and in greater or less degree simultaneously reflecting changes in the activities of the entire body. Some thoughts, with the bodily changes consequent upon them, naturally will make for health, such as the thought that in the springtime sends us into the open; other thoughts will bring on sickness, as for example the thought which allows us to sit in a cold draught when our body is not in a condition to endure it with impunity; and the influence of still others will be an indifferent one, their stimulus being too weak to make way against the natural resistance of the mind or body.

Therefore, in so far as a disease is mental (and every diseased condition must be that to some degree), it becomes the physician's duty to search out and apply the mental precisely as he does the material remedy, and thus—with mind and medicine working hand in hand, and doing so scientifically, with knowledge and wisdom—put himself in a position to do for the service and glory of the brotherhood of man more, even, than he has heretofore been able to accomplish —and this is saying a great deal.

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The Three Divisions of Man's Mind.—In order to grasp the principles that underlie

many of the phenomena that result from the influence of the mind on the body, it first is essential for us to realize that, although a human being has but *one* mind, this mind is made up, constituted, of three strata; namely: (1) the conscious; (2) the subconscious; (3) the superconscious.

The conscious mind is that part which we constantly employ in the affairs of daily life; the subconscious is that part which contains our past, our interpretations of our experiences, some of which at the time of their occurrence in our consciousness, while some of them remained unconscious to us, and it is from this latter part of the mind that what we call instinct arises; the superconscious part of our mind has to do with the future, containing possibilities rather than facts, the coloring of which will depend upon the bias of the conscious mind, which is mechanically influenced by the subconscious. Thus, when we learn a thing, we learn it through the conscious mind; when we forget that thing, it still remains in the subconscious mind and unconsciously influencing the conscious; and, if we remember it, it remains in the conscious, influencing us consciously; when a thing is in the future, it is in the superconscious mind, its coloring being determined by the conscious and subconscious. "What we have been makes us what we are," "the boy is father to the man." What we do today is a direct result of what we did on all the yesterdays.

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Interaction Between the Mind's Parts.—There is no rigid line of demarcation beyond which there lies the superconscious, and another line beneath which lies the subconscious. The middle state is constantly advancing and receding, both above and below. It is not fixed, it is fluid, and is susceptible of regulation, according to the strength of its character. As a man of robust physique may with impunity change from one temperature to another, while a weakling must remain safely within the confines of his native climate, so the sane and healthy mind may safely travel widely in the fields of the subconscious and superconscious, gleaning new truths from the uttermost parts of the mental world to employ to his advantage in the conscious present, while the mental sickling—let him beware how he strays from the immediate, if mediocre, limits of his own native mind-consciousness. Outside of that pleasant land, he will find nothing but chimeras; and they are certain to influence him unconsciously in any case, warping his ideas and distorting his mental vision, without his going to meet and pit himself against them.

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The Treatment of Chimeras.—Fortunately for the mental sickling who is afflicted with the presence of a chimera in his mind, an antidote is provided for him in psychotherapy and he may learn to apply it himself or it may be administered by some one else. If this were not so, the body would become affected, according to the rule that any thought of the mind, if persisted in, must affect the organism in one way or another.

At this point, where a physician was called to treat a patient who, he found, had nothing the matter with him but a fancy, a difficulty entered formerly. Finding no organic basis for the symptoms displayed, seeing plainly that, whether the technical name for the state should be hysteria, neuromimesis, malingering or what not, there was no physical disease, the honest physician could not justify himself for prescribing for him and charging him a fee. If the disease was not physical, it was not disease, and the physician laughed and went his way.

But psychotherapy has taught him now that that was a downright neglect of duty. If a patient thinks he has a disease, that thought is, itself, a disease, and if it be not removed it will presently be displaying physical symptoms, not necessarily of the disease he thought he had, but of that disease which his state of mind naturally will induce by the particular changes which it effects in the tissues or circulation, or in other ways.

Dr. P. P. Quimby, who, so far as the nineteenth century is concerned, was one of the pioneers in the field of psychotherapy, declared that "the cure of a disease consists in the explanation of it [by the doctor]"—a statement that, at the time, raised a great deal of merriment in medical circles, but which is now acknowledged to be a very lucid description of some kinds of disease, whether of the mind, purely, or of the body.

Once a man was so filled with fright at the approach of a negro who rushed upon him with an uplifted ax that he fell dead. Fear had stopped the action of his heart. Now, if at the proper moment it had been explained to the victim that the affair was a joke—which it really was—and that the negro intended him no harm, that explanation would have saved his life. His knees would have ceased trembling, his blood would have resumed its even flow, his eyes would have recovered from their appearance of disorder, and his heart would have resumed its normal action.

While this is an extreme case, it is, nevertheless, one of a class that is perhaps very much larger than is generally supposed. A great number of our ills are those that never happened, and many of them that do happen might easily be stopped by our acquisition of the knowledge of what they really are—how harmless they are, and how, by employing the right means, we may turn the seeming evil into a distinct benefit.

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Mental Treatment of Real Disease.—Even when the disease is one of undoubted and extremely painful reality, sure to result fatally, a mind skilled in interpreting the best that has been thought and known in all ages may be able to bring to the sufferer a mental view of life and its object that not only would ease his pain more or less, both mental and physical, banishing the fear of the death which is so inexorably approaching, but would fill his mind with content and even delight.

Such transformations as these have actually been accomplished in innumerable instances; for, doctors and priests, as well as philosophers and laymen, have, some of them, in all ages, held ideas and beliefs that make the greatest concerns of earthly life seem small and trivial in comparison, the mere contemplation of them lifting the being to such heights of peace and beauty that the mind and brain dwell upon them to the exclusion of all else. Even some strong emotion, although there may be very little truth behind it, may have some such effect, and many a person has gone to an apparently painless or nearly painless death, as we know, carried on the wings of rage or fantastic ecstasy or cynical revenge through tortures that ordinarily are appalling even to the imagination.

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The really healing thoughts, however, are those which relate to the abstract truths and beauties of human existence, and, if a physician is possessed of a well-supplied armamentarium of these, to carry along with his case of medicines, he will find himself doubly equipped for the service of mankind and his own personal comfort.

Here, as in questions of the organism, a knowledge of the patient's past must be employed to throw light on the treatment; for, as the medicine that is good for one organism will be rank poison for another, so the thought that would please and comfort one would fill another with distaste or worse, and this would react on the body. It is as necessary for the psychotherapist to become as familiar as may be with the patient's conscious and subconscious mind before attempting to apply the mental remedy, as it is for the physician to know what his patient's physical diet has been. The woman who, wishing to comfort a neighbor whose husband had recently hanged himself in the attic, in attempting to divert her mind by speaking of homely washing, said that she envied her drying facilities, she having such a nice attic to "hang" things in, may be taken to stand for the heedless class of physician. Even though such a one knows what the trouble is, he blunderingly increases it by his ineptitude and for him there is not much to be said. He has mistaken his forte and should not continue in the profession. But, he is, in effect, no worse than the physician who attempts to give a patient a mental palliative without first learning at least something of what it is that needs palliation. Banalities will not do, triteness is depressing, insincerity is disgusting. He must be origlnal and he must know what he is talking about as well as to whom he is talking.

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Among the many routes by which the mind of the practitioner acts upon the mind and the disease of the patient I may mention:

1. That taken directly by the subconscious mentality of the physician. The patient has some opinion regarding him the instant he sees him, an opinion that probably will be modified or even may be wholly changed on acquaintance, but which at the moment will play a powerful part as a therapeutical agent for or against improvement. Of the nature of this action, the doctor must be largely unaware at the time—that is, so far as the doctor goes, he is employing unconscious therapeutics. This is so even if he is consciously attempting to make a good impression, for, it is one thing to try to be agreeable and another, to be so. The safest way is for the physician to become a strong character, broadminded, well read, optimistic, and generous-hearted. Any patient who would be unfavorably affected by that kind of man is probably beyond help, and, at all events, a physician answering to this description has done all that is humanly possible to make himself agreeable and, therefore, has nothing with which to reproach himself, whatever may be the impression received of him by the patient.

2. Environment acts a certain part in influencing the patient's mind, an agreeable situation having a favorable effect and a disagreeable one the reverse. This may be

wholly or partly conscious or unconscious both to physician and patient.

3. Next comes direct suggestion to the patient's conscious mind by the doctor's conscious mind, either through words or drugs, or both, or by other agencies.

4. Through the doctor's suggestion or through the patient's own will, as manifested in the action of the conscious mind on the superconscious, in a determination to overcome disease and become well, a certain healing influence may be brought to bear on the body. This will not have much effect, however, unless the determination emanates from the patient's subconscious mind. In such a case, he has grown up logically to the idea, it is a part of him, and the hope that it holds out is a natural one, logical and sane. There is no use for him to grit his teeth and vow he will get well, at the same time feeling that he cannot.

Though this method of attempting to force the gates of reason and health is so much in vogue among those who fail to comprehend the nature of the relation between the subconscious and the conscious mind, it never can be successful. When a man has, by practice, by educating his muscles, fitted himself to raise from the floor a weight of three hundred pounds, he may safely and sanely affirm that he can do it; but, if he is a flabby-muscled weakling, weighing only about half as much as the burden, no assertion of his, however determined and powerfully expressed, will ever enable him to raise that weight. It is true that we can do what we think we can—or, it is true in a sense—the reason being that our subconscious mind informs us from past experience of what we are able to do, and the conscious mind declares that this thing is one of the class that lies within our ability. We fail here, even when the conscious mind is mistaken, judging falsely of the character or strength of the problem, as often happens. All *direct* effort is a mistake. *Indirection* is the keynote. The best way to develop lung power is, to use the lungs.

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Negative and Positive Suggestions.—Some operators of mental therapy hold that suggestion has two sides, the positive and the negative: the first referring to suggestions given the patient, in order to fill his mind with curative thoughts of hope, trust, joy, and so on, the second having to do with ousting from his mind such ideas and notions as have exerted a deleterious influence. I think, however, it will be found wiser to leave the negative to itself, after having administered the positive. The curative influences will, of themselves, take the place of the thoughts that should be removed, as, to bring a light into a room, is, to expel the darkness by that very process. When we have said that snow is white, we do not need to add that it is not black, and, in fact, to do so would arouse in our hearer's mind an image—even if a negative one—of the very thought which we wish him to forget; and a negative thought has influence, sometimes leading to a doubt of the speaker or of his words, when a simple and unadorned assertion in the affirmative would prevent it.

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Direct and Indirect Suggestion.—It is held by some writers that the subconscious mind can be influenced psychotherapeutically in two ways, namely, directly and indirectly; directly meaning immediately upon the subconscious, through hypnotism and the personality of the physician as felt by the patient; indirectly meaning, by way of the conscious, appealing to the patient's reason, showing him and convincing him that something is being done for him, something in which the physician himself has faith.

A RAINY DAY

The soft, gray rain comes slowly down,
Settling the mists on marshes brown,
Closing the world on wood and hill,
Drifting the fog down vale and rill;
The weed-stalks bend with pearly drops,
The grasses hang their misty tops,
The clean leaves drip with shiny spheres
And fence-rails run with pleasant tears.

Away with care! I walk today
In meadows wet and forests gray;—
'Neath heavy trees with branches low,
'Cross splashy fields where wild things grow,
Past shining reeds in knee-deep tarns,
By soaking crops and black-wet barns,
On mossy stones in dripping nooks,
Up raining pools and brimming brooks
With waterfalls and cascadills
Fed by the new-born grassy rills;—
Then circle home across the lots
Through all the soft and watery spots.

Away with care! I walk today
In meadows wet and forests gray.

—L. H. BAILEY in "Wind and Weather," published by Charles Scribner's Sons.

Among the Books

CUNNING AND CAMPBELL: "THE HEALTHY GIRL"

The Healthy Girl. By Mrs. Joseph Cunning and A. Campbell, B. A. London: Oxford University Press. 1916. Price $1.75.

This is a very delightful book, written in a popular and attractive style; but it will not hurt physicians to study it, in fact it will give them some rather novel viewpoints on very important subjects. The authors take up in succession the mind and body; work and rest; digestion and indigestion; fresh air and breathing; then they devote several chapters to the care of the body, after which they discuss bad habits, open air schools and just schools.

The pages are replete with epigrammatic sayings that give the views of the authors strikingly; for instance "an unhappy child loses weight—her mental trouble causes bodily ones." . . "For every mental process there is a corresponding bodily one, and the bodily one consists in changes in the nervous system." . . "A girl who is worried or overworked will often be able to rest far better by using her hands and doing a bit of useful work quietly, than by doing nothing." . . "All brain work is largely dependent on cooks." . "Dyspeptic girls are those who have forgotten to clean their window-panes, and their view of things is apt to be gloomy. Anemic girls have forgotten to pull up the blind; they are always sleepy. Girls with a crooked spine are apt to see things crooked, for the glass of their window-pane is roughened, and distorts their vision." . . "The cause of a little girl's tears should always be tactfully sought; then she should be encouraged to try to help herself." . . "Little children are often what older people call untruthful, largely because they have not learnt to know the difference between what they imagine and what happens. A little girl of four will romance delightfully. In older girls this romancing becomes a very real difficulty." . . "Our body is the only instrument we possess through which our minds may express themselves, and that instrument must be kept clean and fit for use." . . "People talk as if free will meant being able to do what you like. . . It is not that at all; it is to be able to do what you don't like." . . "Many bodily troubles may be due to 'taints of blood,' but others are as surely the effects of 'sins of will'."

These are only a few specimens of the many good things that are scattered through this splendid little book, which we recommend strongly to the attention of physicians and of their clients, especially the mothers of girls.

EGBERT: "HYGIENE AND SANITATION"

A Manual of Hygiene and Sanitation. By Seneca Egbert, A. M., M. D., Professor of Hygiene and Dean of the Medico-Chirurgical College of Philadelphia. Sixth edition: enlarged and thoroughly revised. Illustrated with 141 engravings and 5 plates. Philadelphia and New York, Lea & Febiger. 1916. Price $2.25.

The time is long since past, when the study of hygiene and sanitation was a specialty outside of the direct function of the physician, and even the layman has become convinced that it is advisable for him to investigate the subjects of personal and of public health and of their mutual relations. For, the bodily health, as well as the mental and moral health of communities depend on that of the individuals. As there can be no normal functioning of the body if any one organ is abnormal, so the community cannot be healthy if the individuals comprising it are diseased. It is therefore significant of progress in public health that the necessity exists for many books dealing with this subject, and that this need is supplied by many more treatises at present, than could have found readers in former years.

In the matter of new publications, it is always a cause for congratulation if new editions of old books are called for. Moreover, it is meet that books which have been found of service in the past should be revised and completed in accordance with increasing knowledge. Doctor Egbert's book having appeared in its sixth edition has proved its value and merit as a safe guide for the student of hygiene and sanitation.

The present edition has been enriched by a new chapter on industrial hygiene and

occupational disease, while consideration has been given in the respective chapters to the changing views concerning air pollution and ventilation, to outdoor schools and playgrounds, improved methods of water purification and sewage disposal, military hygiene, and to the demonstration of recent achievements in lifesaving and health conservation.

"INTERNATIONAL CLINICS"

International Clinics. A quarterly of illustrated clinical lectures and especially prepared original articles. Edited by H. R. M. Landis, M. D. Volume III. 1916. The J. B. Lippincott Company. Price $2.00 per volume.

Among the many interesting articles in this volume of the International Clinics we may mention that on the treatment of obesity, with special consideration of the results that may be obtained by the use of the Naegleschmidt-Bergonie method; also, the one on the medical uses of high-frequency currents. Further, a timely article is that on the diphtheria-toxin skin reaction (Schick test) and its application, because the "Schick test" is certain to gain in general favor and to manifest its practical value in the degree in which it will be applied more frequently. Other articles deal with diagnosis, surgery, skin diseases, and other subjects of interest. We were interested particularly in a biographical sketch concerning that master clinician, Professor Trousseau, written by our well-known medical historian, Dr. Fielding H. Garrison, of Washington. This volume of the International Clinics ranks well with its predecessors in usefulness to the general practitioner.

"INTERNATIONAL CLINICS"

International Clinics, A Quarterly of illustrated clinical lectures and especially prepared original articles on treatment, medicine, surgery, and other topics of interest to students and practitioners. Edited by H. R. M. Landis, M. D. Volume 2, 26th series, 1916. Philadelphia: The J. B. Lippincott Company. Price, per volume, $2.00.

Among the many valuable articles presented in this volume, may be mentioned: indications for vene ection, by E. J. G. Beardsley; Tetanus: lessons gleaned from the war, modern research, and private practice, by J. B. Young; American mineral springs, by Guy Hinsdale; diagnosis and treatment of peribronchial tuberculosis in children, by Henry Farnum Stoll; Prenatal and postnatal work, by H. R. M. Landis, Thomas C. Kelly, and Charles C. Norris; typhoid inoculation in the reclamation service, by Hugh Arbuthnot Brown; remarks on the drugs employed in urological practice, by Charles Greene Cumston.

PATRICK: "PSYCHOLOGY OF RELAXATION"

The Psychology of Relaxation. By George Thomas White Patrick, Ph. D. Boston: The Houghton Mifflin Company. 1916. Price $1.25.

In his preface, the author says that, "to select for psychological treatment and to bring together in one book such subjects as play, sport, laughter, profanity, alcohol, and war, may seem to some capricious, to others possibly even sensational," yet nothing was further from his purpose than to be guilty of either. Indeed, these subjects are dealt with by him in a decidedly serious, matter-of-fact manner. They have been chosen, because they all illustrate one fundamental law, namely, that of necessary relief from the stress and tension that characterize our modern life.

Americans have been reproached—and justly so—for being too strenuous, intense, and of exerting themselves to excess, whether it be in their work or play; but particularly so in the latter. For, not only is our work an exceedingly strenuous pursuit, but our play is violent, intense, and exhausting. The many calls that have been sent out of late, demanding an occasional letup in the strenuous chasing after dollars and pleasures, are not dictated by any "new thought" notions, but merely by good, common sense. For some years, all over the land, there has been evident a growing tendency to take up and foster play. There is the recreation movement, the physical-culture movement, the playground movement; there are the boy scouts and the camp-fire girls; there is the increasing interest in athletics, in golf, Olympic games and in outdoor life in general; and all kinds of this play are being pursued with the same vigor as is the regular work. "Play! play hard! play until you are exhausted" seems to be the new law. Verily, it is another instance of the old truism—"Unless ye become as little children"—for a child has sense enough to stop its work (that is to say, its play) and to relax when it is tired.

In this book of his, Doctor Patrick has undertaken an examination into the psychology of various forms of relaxation, with

a view to demonstrating the physiological need of some of them and to explain the psychological basis of others. In this manner, he takes up successively the psychology of play, of laughter, of profanity, of alcohol, and of war. True, more than once the conclusions at which he arrives are startling; yet, on second and third thought, his logic must be admitted. The author certainly has handled his subject in a masterly manner and, moreover, not only has presented an exceedingly readable book, but also one that is certain to repay close study and to prove of valuable service to physicians, parents, educators, in short, to all thinking men and women.

"MEDICAL CLINICS OF CHICAGO"

The Medical Clinics of Chicago. Published bi-monthly by The W. B. Saunders Company. Price, per year, $8.00.

Among the contributions to the November number (Volume 2, Number 3) of *The Medical Clinics of Chicago*, is a discussion of the modern medical treatment of chronic ulcer of the stomach and duodenum, by Dr. Walter W. Hamburger, at the Cook County hospital. There are two clinics on infantile paralysis, one by Isaac A. Abt, of the Michael Reese Hospital, and one by Ralph C. Hamill, of the Cook County hospital. Doctor Tice discusses the treatment of gangrene of the lung. Doctor Williamson speaks of a case of atypical gout. There are other clinics, besides those here mentioned. We have said enough of this publication at different times to commend it to our readers.

"PROGRESSIVE MEDICINE"

Progressive Medicine. A quarterly digest of advances, discoveries, and improvements in the medical and surgical sciences. Edited by Hobart Amory Hare, M. D., assisted by Leighton F. Appleman, M. D. Philadelphia: Lea & Febiger. Price, per year, $6.00.

In the December volume, the literature on diseases of the digestive tract and allied organs is reviewed by Edward H. Goodman; that on diseases of the kidneys, by J. Harold Austin; the genitourinary diseases have been dealt with by Charles W. Bonney; the surgical literature by Joseph C. Bloodgood.

We, naturally, have our interest aroused, particularly, by H. R. M. Landis' practical therapeutic referendum, in which we find many points of value. We read, for instance, that the use of atropine has been advocated in the treatment of pylorospasm in children, and that, if the spasm is not relieved by the use of atropine, the presence of a congenital stenosis may confidently be assumed. An important point is, that children can bear much larger doses of atropine than will adult persons, a fact that must be taken into consideration when prescribing this drug for the little ones.

"THE MULFORD DIGEST"

The H. K. Mulford Company, of Philadelphia, has published a number of this publication commemorating the twenty-fifth anniversary of The Mulford Laboratories, and considerable interesting information is there presented on the preparation and use of biologic products. We congratulate The Mulford Company on the success to which it has attained in this quarter of a century and upon the confidence that it so justly enjoys among physicians. We wish it many more years of useful and successful work.

GOULD AND PYLE: "CYCLOPEDIA OF MEDICINE AND SURGERY"

Gould and Pyle's Cyclopedia of Practical Medicine and Surgery, With Particular Reference to Diagnosis and Treatment. By R. J. E. Scott, M. A., M. D. In one volume. With 653 illustrations. Third edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co. 1916. Price $12.00.

The fact that a new edition of this convenient, single-volume work of reference is called for only three years after the publication of the second bears witness to the favor with which it has been received. With regard to works of this kind that are intended for rapid reference, the general practitioner is very likely to prefer those consisting of but a single volume, though, perhaps, somewhat bulky, both for the sake of convenience and on account of the smaller cost.

The present edition of this cyclopedia contains new articles on a large variety of subjects, among which may be mentioned the Coleman-Shaffer diet in typhoid and other fevers, dementia præcox, emetine in dysentery and in pyorrhea, the Harrison law; osteoplastic operations for Pott's disease of the spine, the luetin reaction, pulmotor; not to mention the many others. The type is clear and sufficiently large not to tire the eye. Altogether, the book may be cordially recommended to the general practitioner when in search of concise information without waste of time.

Condensed Queries Answered

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

Queries

QUERY 6278.—"Autotoxemia." J. L. S., Iowa, desires therapeutic suggestions in the case of a woman, fifty-six years old and past the climacteric, besides "heart trouble" and "stomach trouble," complaining of a whole lot of other "troubles." "She has four children, all in good health. There is no history of tuberculosis or syphilis, she has always been a very hard worker. She has had socalled nervous headaches and also nervous prostration. She is tall and thin. Test for hemoglobin shows about 75. Her skin is yellow and clammy. She is badly constipated (spastic, I think) has shortness of breath, at times; feels very weak; is unable to keep warm, at times; circulation is very easily excited; pulse is 70, full, firm and compressible; arteries are not hardened to any great extent; blood pressure is 140 mm. Her urine has a specific gravity of 1026 and is acid in reaction and dark of color; contains some phosphates, also trace of indican; urea content is very low; albumin and sugar are absent. She passes about 1000 mils (Cc.) in twenty-four hours.

"The most annoying symptoms that she complains of are, a shooting pain through the side of the head and a peculiar blindness which comes on when she lies down or when rising from a reclining position. She says that she feels as though she is going to die when she has this sensation. All viscera seem to be normal as to size and location."

This woman undoubtedly is autotoxemic. The shooting pains in the side of the head are due, probably, to hypertension, and this condition as well as the temporary blindness may disappear under thorough elimination and the correction of any existent eyestrain.

What is the character of the stool? Is there any sign of gastric dilatation or increased area of hepatic dulness?

We advise giving blue mass and soda, gr. 1-2, and podophyllin, gr. 1-6; half-hourly for six doses every second or third night, followed by a laxative saline next morning. Also, small doses of aconitine, digitalin, and strychnine (or minute doses of veratrine), morning, noon, and night, to equalize the circulation. Further, boldine, gr. 1-32 to 1-16, before meals, and chionanthoid, gr. 1, after eating. These clearly are indicated. Dilute phosphoric acid or the nucleinated phosphates might prove beneficial later.

The skin should be kept active. The woman must be instructed to breathe deeply; also, to chew her food thoroughly. Careful dieting is essential. The mouth must receive careful attention. The urine should be examined at frequent intervals.

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QUERY 6279.—"Infantile Paralysis and Food-Poisoning" B. K., New York, asks whether there is any relation between epidemic acute anterior poliomyelitis and food-poisoning, as, for instance, from spoilt sausage (when containing ground corn-meal) and mussels and oysters, canned beans and other vegetables, moldy corn, and so on. What part, he asks, did moldy corn have in the present epidemic? Also, what is the differential diagnosis between infantile paralysis and botulism?

We have not seen any mention, anywhere, of the possibility of such a relation as here suggested. If the idea has occurred to research workers on the problems of infantile paralysis (as it probably has), it presumably was discarded because of the essentail difference between the etiology of poliomyelitis and of food-poisoning; and this even though many points of similarity may be shown clinically. For instance, there are the gastro-intestinal disturbances, which may be intense in both affections; there is muscular weakness, there even may be loss of function due to central nervous disturbances. As a matter of fact, the bacillus botulinus produces

bulbar paralysis and paralysis of the eye-muscles, as also great muscular weakness. There also occur degenerative changes, chiefly in the cells of the gray matter of the medulla, cord, and salivary glands. (Kendall's "Bacteriology," 1916. p. 486.)

In botulism, however, the disease generally develops and progresses without fever, while this symptom is marked in food-poisoning caused by the bacillus enteritidis, and likewise in infantile paralysis. In botulism, obstinate constipation is common, while other forms of food-poisoning are associated with diarrhea that often is unrestrainable. Diarrhea also has been found to be a frequent symptom in the early stage of infantile paralysis.

One important difference between poliomyelitis and food-poisoning is, the age incidence, the former being markedly a disease of childhood, affecting adults only exceptionally, while food-poisoning, more particularly botulism, will occur in anyone who has partaken of any tainted food. As to botulism, the cause mostly is spoilt ham; in fact, Kendall says that only hams and similar meats and meat products give rise to that disease.

Other forms of food-poisoning, the toxigenic agents of which are, principally, the bacillus enteritidis of Gaertner, the bacillus paratyphosus, bacillus suipestifer (hog-cholera), proteus vulgaris besides several others, result from the ingestion of a considerable variety of other decayed foodstuffs. Regarding this phase, we suggest that you consult the "Reference Handbook of the Medical Sciences" (third edition, volume 4, p. 420, article, "Food-Poisons"), which work you can consult in the library of the New York Academy of Medicine, and probably also in the other medical libraries in your city.

There is another important point of difference between botulism and other forms of food-poisoning, and also of poliomyelitis, namely the fact that botulism is an intoxication, while the other affections are infectious diseases and directly due to the action of bacteria. In the various epidemics of food-poison that have been investigated, the ham and other foodstuffs incriminated caused the sickness by virtue of the toxin elaborated by the bacillus botulinus. The effects produced by this toxin may be said to be parallel to those of the bacillus of diphtheria and of that of tetanus. When animals were inoculated with decomposed ham or other foodstuffs and had succumbed to the resulting disease, their organs did not contain the bacillus botulinus. When decayed foods were macerated and filtered through porcelain, the filtrate was as capable of producing botulism in animals as was the unfiltered material, thus showing that the pathogenic agent is a soluble toxin.

So far as we know, poliomyelitis has indubitably been proved to be a bacterial disease. Even though the virus be ultramicroscopic, its presence has been demonstrated definitely.

To get back to your questions, we do not believe that poisonous tainted food stands in any relation whatever to the recent epidemic of poliomyelitis in our eastern states.

The differential diagnosis between infantile paralysis and botulism can be made from some of the information herein presented. Nevertheless, the point which you have raised is of interest and well worth considering, the rather, as it may happen that a diagnosis can not be formulated until paralytic phenomena are apparent, inasmuch as the symptoms in both diseases are not so absolutely marked as to be unquestionably characteristic.

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QUERY 6280.—"Diabetes Mellitus." H. K. S., Ohio, has under his care a girl of eighteen, who, when first seen, was very weak and mentally depressed; had a torturing thirst and a voracious appetite. Two drops of urine reduced five mils (Cc.) of Haines's copper-solution. She was placed on a proper diet and the following treatment: Strychnine arsenate, grain 1-128; iron arsenate, gr. 1-64; lithium benzoate, gr. 1-2; quassoid, gr. 1-64; one such dose every two hours. The results have been truly remarkable. Her appetite now is normal, the thirst has disappeared, and she is strong, vivacious, and apparently well except that sugar persists in the urine, 5 drops now reducing 5 mils (Cc.) of Haines's solution. Our correspondent asks: "Can I reasonably expect the present medication to control the loss of sugar or must I try other means?" He is loath to relinquish the use of the prescription that has proved so effective, although some additional treatment may be advantageous.

One hardly could expect the sugar to disappear entirely under such medication alone. In every case, a carbohydrate-free diet should be instituted until glycosuria is controlled, when the carbohydrate tolerance of the patient must be ascertained. Under a carbohydrate-free diet, tissue metabolism improves and the power of the system to make use of such food increases. Elimination

—renal, dermal, and intestinal—must, of course, be maintained and appropriate digestion insured.

The present writer has found the Von Noorden diet (which contains 100 Grams of carbohydrates) extremely satisfactory. If it does not cause any glycosuria, bread may gradually be increased until sugar again appears in the urine. If sugar does appear after this test diet, continue with it until it is constant in amount, then gradually diminish the bread ration.

In more severe cases, it is difficult to render the urine free from sugar, but we can find a point to which the intake of carbohydrates can be raised without increasing the glycosuria, while diminishing the acetonuria. This will be the best point at which to maintain a patient's metabolism; for, even if our restriction produces a fall in the amount of sugar, it is not beneficial if it causes an increase of the acetonuria.

Wheat seems to be the form of starch least tolerated by diabetics; and, unfortunately, many of the gluten-foods sold that are not unpalatable are of fraudulent composition. Brusson-Jeune rolls, which consist of gluten and some starch, are palatable and convenient, and can now be obtained in this country.

Protein diabetic bread and almond-cakes made up with eggs can be given when gluten-breads cannot. Potato-starch and oatmeal also are better assimilated than is wheat-starch, and the patient's tolerance for these should be determined, as not infrequently a fair amount of carbohydrates can, without harm, be given in these forms. Fats may be given freely, provided the lower fatty acids are gotten rid of from butter by thoroughly kneading it in cold water.

As a matter of fact, doctor, drugs alone have little influence on glycosuria, codeine appearing to be about the most effective among them. Sodoxylin is invaluable in acidosis.

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QUERY 6281.—"Removal of Superfluous Hair." M. T., Porto Rico, inquires as to whether we know of any substance that will safely and entirely remove superfluous hair, completely killing the hair-roots, so that the hair can not grow again. All the depilatories that she has tried merely remove the hair temporarily. The use of electrocautery is objected to.

Unfortunately, there is no known substance that will destroy the hair-follicles without also injuring the skin. A good depilatory completely removes the hair and at the same time so weakens the hair-follicles that after several applications of it only a very fine lanugo, or down, will make its appearance.

In this connection, it should be stated that an unusually luxuriant growth of hair in normally hair-producing areas can not be destroyed as readily as can coarse hairs growing where hair does not grow normally. Thus, for instance, the upper lip in the "female of the species" often bears a growth of fine hair. Should this, for any reason, become too abundant and thus disfiguring, it is very difficult to stay this natural process in that locality. On the other hand, coarse hairs of an unnatural type growing from a mole or other limited area normally not hair-producing can very readily be destroyed. Still, where there are but few hairs, it is safer to have them removed with the epilating forceps, plucking them out by the roots.

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QUERY 6282.—"Facial Eczema in Infants." E. M., Indiana, wants advice in the case of a baby, 2 1-2 years of age, upon whose face, when it was three weeks old, an eczema broke out. Local medication has failed entirely even to ameliorate the condition. No internal medication was tried. The eruption covers nearly the whole face. The affected area gets dry and itches, so that the child will scratch until blood is drawn. At times it improves, then gets worse again. The boy was bottle-fed from the start, but now eats the same as the rest of the family. He is well nourished and seemingly well in other respects. The father, aged thirty-five, gives the impression of normal vigor and vitality. The mother is twenty-nine; weighs 210 pounds, and has three children, all of whom were raised on the bottle. There are no objective signs of constitutional disease.

We suggest that you institute a thorough cleaning out of the intestinal canal and then look to a careful regulation of the child's diet. Since some of these cases do better on a protein and others on a carbohydrate diet, watchful experimentation may be in order. We suggest that you try a carbohydrate diet first.

By way of local treatment, first try some such stimulating ointment as the following:

Dried alum	grs. 5
Ichthyol	grs. 10
Phenol	grs. 5
Basilicon ointment base	oz. 1

Apply this every other evening and carefully remove next morning, with gauze dipped in oil. Later, substitute zinc-stearate oint-

ment, applying twice or even three times a day, since, doubtless, the child will rub most of it off. The first preparation should be used sparingly.

A cure generally can be effected in these cases by the means of injections of staphylococcus bacterin. Give to this patient 1-4 mil (Cc.), injected subcutaneously (not into the muscles), and preferably in some portion of the abdomen below the umbilicus. After five or seven days, give a second injection, of 1-3 mil (Cc.), this time between the shoulder-blades. For the third injection, use 1-2 mil, 3-4 mil for the fourth injection, and 1 mil for the fifth injection; provided the patient does not show a severe reaction (that is, rise of temperature, severe prostration, and the like). If such reaction occurs, the next injection should not be increased in size. The injections should be alternated between the abdomen and back. Occasionally hot fomentations, not too hot, should be applied to the diseased area, in order to promote the circulation. To effect a cure, probably some fifteen or more injections will have to be administered.

It probably would be well to put this patient on citrous fruits, orange-juice, sweet lemonade, or, if you prefer, you may give 5 grains of sodium citrate per day. Emulsion of liquid paraffin might prove beneficial.

If you will persistently follow out this line of treatment, we believe you will see improvement. Improperly treated, these cases of facial eczema become chronic, frequently involving the scalp and persisting for years.

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QUERY 6283.—"Enlarged Tonsils." W. A. M., New York, wishes to be informed whether there is any way by which to get rid of tonsillar enlargement except by operation.

Aside from surgical removal or electrocautery, permanent cure of chronically enlarged tonsils rarely is possible. The use of an autogenous bacterin prepared from organisms such as are found within the tonsillar crypts will, in acute cases of enlarged tonsils, as a rule markedly reduce their size; but, in chronic hypertrophy, much of their medullary tissue has been replaced by fibrous tissue. This, of course, eventually undergoes contraction, or atrophy, but mostly not to the same extent as in other organs, because of the constant reinfection of these exposed glands,

If the condition is one of fibrosis, there is a bare possibility that fibrolysin, or thiosinamine, may have some effect. Of this, however, this writer has no positive knowledge. So far as we are able to discover, there is in literature nothing on the subject. Practically all authors advise tonsillectomy. True, a certain minority of writers are opposed to this, but they do not offer any satisfactory substitute.

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QUERY 6284.—"Intestinal Tuberculosis?"—C. B., Kansas, sends a specimen of feces for examination, together with the following clinical data: "Woman, thirty-eight years old, married, one child nine years old, has been afflicted with chronic diarrhea for the past eight years, and it is growing progressively worse, she now having eight or ten movements in the twenty-four hours, accompanied by intestinal cramping. Her present weight is 90 pounds (never weighed over 115 pounds); height, 5 feet 6 inches. Many physicians have been consulted in vain. Lung examination, negative. Appetite, good, but she dares not eat, for fear of exciting the bowels to action. Diet consists principally of bread, butter, cereals, and milk. For twenty-four hours before the specimen of feces was secured, her food consisted of cream of wheat, bread, butter, cocoa, potatoes, and tomatoes. Urine, negative. Tuberculosis of the intestines suspected."

We have here a woman thirty-eight years old who has been afflicted with chronic diarrhea for eight years and now has 8 or 10 movements in the twenty-four hours, accompanied by intestinal cramping. Her normal maximal weight was 115 pounds; at present, it is 90 pounds. Examination of the lung is negative; examination of the urine is negative, that of the feces failed to show the presence of tubercle-bacilli, but disclosed a few red blood-corpuscles.

With reference to the opinion that this might be a case of intestinal tuberculosis, it is to be pointed out that primary intestinal tuberculosis is a relatively infrequent disease, and far more so in adults than in children. However, secondary tuberculosis of the intestines is reasonably frequent as a late complication of pulmonary consumption, and then usually is rapidly fatal. Consequently, the fact that this patient has been ill for eight years argues against the tuberculous nature of her intestinal trouble, whatever else it may be. Furthermore, the correctness of such a diagnosis is rendered improbable by the fact that there is apparent no clinical evidence of any active tuberculous process elsewhere in the organism.

Characteristic of the dejecta in the diarrhea associated with intestinal tuberculosis is the

odor, which is extremely disagreeable and penetrating; the feces usually are clay-colored and may show an admixture of mucus or shreds of mucous membrane. Macroscopically, blood and pus are absent. The microscopic demonstration of tubercle-bacilli is not of deciding importance for the diagnosis of intestinal tuberculosis, nor is their absence. Rosenberger, of Philadelphia, has asserted that tubercle-bacilli may be found in the feces of upward of 90 percent of all persons afflicted with pulmonary tuberculosis; also, according to him, they are to be found even in persons in whom the disease is latent and, indeed, in persons who are clinically free from tuberculosis. Brem and others have proved that this claim is extreme and that very often acid-fast bacilli were mistaken for tubercle-bacilli. On the other hand, the absence of acid-fast rods does not exclude the possibility of a tuberculous enteritis, because this may be owing to toxins or the tubercle-bacilli may be so few in number that they can be discovered only through the results of animal-inoculation.

It may be said, in passing, that in persons having intestinal tuberculosis, the urine usually gives a positive indican reaction—and this did not show in the urine of the patient in question.

The presence of red blood-cells in the feces justifies the inference that the test for occult blood also would have been positive, and this, in itself, would justify the suspicion of intestinal tuberculosis; however, such a diagnosis very naturally must be confirmed by other symptoms, but, we have seen that the absence of confirmatory factors renders this diagnosis very improbable in the present case.

The question then, arises, what may be the cause of this patient's condition; and, since we can exclude intestinal tuberculosis as improbable, we have to think next of chronic perityphlitis and of malignant disease of the intestine.

For the diagnosis of chronic perityphlitis, we should expect a history of acute attacks of pain in the region of the appendix, associated with fever and tenderness on pressure. It might, probably, be possible to demonstrate the presence of a circumscribed effusion by means of light percussion. While in the presence of tuberculosis, and possibly of malignant disease, we might find the inguinal and crural lymph-nodes enlarged, this would not be so in chronic perityphlitis. There would be short attacks of fever, while palpation would discover swelling in the region of the appendix and the latter tender. Attacks of nausea and vomiting are more frequent in chronic appendicitis than in intestinal tuberculosis or carcinoma.

Carcinoma of the cecum would be suspected, if it were possible to discover a circumscribed movable tumor, considerable pain, rapidly progressing cachexia, fresh or occult blood in the feces, and absence of the diazo-reaction in the urine.

In the case before us, the clinical data are not sufficient to venture a diagnosis with any degree of probable certainty, although we do believe that intestinal tuberculosis may be excluded. It is possible that the present diet, consisting, as it does, mostly of cereals and milk, keeps up the trouble by producing and maintaining fermentation, and we believe that it might be advisable to try the effect of a protein diet in which the different foodstuffs are prepared with very great care. This might include: for the meat portion, small amounts of chopped beef, either boiled or broiled; grilled lamb chops and boiled fish; the leguminous vegetables (beans, peas), in the form of purées and cream soups; the carbohydrates (starches, sugars) kept down to a minimum; vegetables, such as carrots, beets, spinach, and cauliflower, in moderate amounts; fruit-acids very probably would be of advantage, particularly in the form of baked apples and the juice of orange, lemon, and grapefruit. Therapeutically the patient should receive large doses of the combined sulphocarbolates of calcium, sodium, and zinc, while the sulphocarbolate of copper might tentatively be added in suitable amounts.

Without a doubt, a patient with a history like this requires careful and continued treatment. Also, one must be prepared to see the indiction change from week to week. The principal points that must engage our attention are the diet and intestinal antisepsis.

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QUERY 6285.—"Dystrophia Adiposogenitalis." R. E. F., Georgia, writes: "I am in need of help, and I understand that the nearest to knowing a thing is, to know where to find out about it; hence, my appeal to your estimable periodical.

"I have a patient, a woman thirty-three years old who has been married seven years and has one child four years old. Her weight is 198 pounds; her height, 5 feet 8 inches; bust measure, 46 inches; waist, (laced) 34 inches; hips, 45 inches; size of shoe worn, No 5 1-2. Her bones are small, arms and hands beautiful; legs not large,

but hard and firm. Her bust is very large—fat—as is the lower portion of the abdomen—a veritable roll of fat.

"I attended this woman in her confinement. Nothing unusual and no laceration occurred. She is of a nervous temperament and has 'fidgets.' She is so anxious for relief that she has tried many things; is now taking violent exercise (on her own initiative), and has dieted, starved, and tried other measures; although nothing is likely to relieve her condition. She is a large woman. Her father and mother as also one sister are large; brother and one sister, however, are below the average. I just want someone else to tell her that she should be satisfied with her lot, but she seeks relief for esthetic reasons. Can you suggest anything that will reduce that mountain of flesh?"

The fact that the deposits of fat in this woman are more pronounced about the bust and lower abdomen leads us to regard this as a case of obesity of endocrine origin. In dystrophia adiposogenitalis, you know, one of the cardinal manifestations may be obesity, ranging from a slight to the most inordinate accumulation of fat. During the past few years, various writers have called attention to the fact that certain forms of obesity are a consequence of the lack or an abnormality of one or more of the internal secretions—this owing to some derangement of endocrine glands involved. Naturally, under such circumstances, any treatment effective in the socalled exogenous type could not possibly prove beneficial in the former.

In some of these cases, there often is present thyroidal disturbances; in others, the function of the pituitary gland seems to be disordered, in which latter case, the administration of pituitrin occasionally will help promptly.

As you know, in what is called Dercum's disease, women, during the middle period of life, have fatty swellings in various parts of the body, these deposits often forming quite large tumors, sometimes even pendulous. They never occur, though, on the hands, face or feet. This form differs from the others, in that nervous disturbances usually manifest themselves in the form of pains and paresthesias. The exact nature of the trouble is as yet unknown; however, in several instances reported, the thyroid gland had undergone atrophic changes, and improvement followed the administration of preparations of sheep's thyroid gland.

If you care to make a thorough physical examination of your patient and report your findings (at the same time giving us some idea of her mode of life), we shall be pleased to attempt further suggestions. It is barely possible that the superfluous adipose tissue about the lower abdomen could be removed by the steady use of the roller or percussing-chair extolled by mechanotherapists.

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QUERY 6286.—"Nephrolithiasis or Cystitis?" J. O., Tennessee, has requested a microscopic test of a specimen of urine voided by a woman about twenty-eight years of age, who has had spells of severe pain in region of her left kidney and in the left inguinal region. "She is very nervous and has been dyspeptic for a number of years. She came under treatment ten days ago, 'all in,' had a temperature of 100° F., and was aching badly. Family history negative. Was put to bed, and is on raw eggs, as this is about the only thing she can eat, everything souring on stomach, even cold water. No symptoms of lung involvement. Temperature remains between 99° to 100° F. Feeling better some days than on others. Has had bladder symptoms for quite a long time, with burning sensation when urinating. Tuberculosis of the kidneys or renal calculus is suspected. Patient is married, but has had no children."

Undoubtedly you have to do with a severe infection, but no tubercle-bacilli could be found after a most careful search. Streptococci were present in abundance, as also numerous staphylococci and colon-bacilli. You must bear in mind, however, that tubercle-bacilli are not always present, even in well marked cases of tuberculosis of the kidneys. It would be well to have a radiograph made; also, to make a cystoscopic examination. As you will understand, it is most desirable to ascertain definitely the presence or absence of calculi; also, to find out whether one or both kidneys are affected.

In the meantime, the patient should receive large doses of arbutin, hexamethylenamine, and nuclein, with barley-water (or other bland mucilaginous beverage) in abundance. An appropriate stock or autogenous bacterin (the latter being infinitely preferable) should be administered every third or fourth day. Diet her carefully, and give papayotin and diastase after meals and a little brucine or strychnine with or just before eating.

It would be well, of course, to make a thorough examination of the pelvic viscera; also investigate the history prior to and since her marriage. What is the condition of the husband?